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Agricultural.

SHORTHORNS VS. JERSEYS.

The *Journal* at West Liberty, Iowa, in a late issue, referred to a good-natured strife going on recently in its town between a couple of citizens with regard to their cows. Mr. X. (says the *Journal*), owns a large high-grade Short-horn that gives fourteen quarts per day. Mr. Y. owns a Jersey that gives eight quarts per day. In order to decide on the merits of the cows respectively, it was agreed first to ascertain the quantity of cream from a given quantity of milk from each cow, and it was found that of each cow's milk one sixth went to cream, which indicated the superiority of the grade Short-horn; but the next test, which was for quantity of butter, radically changed all this, for from the fourteen quarts taken in one day from the Short-horn there were made only thirteen ounces of butter, while from the eight quarts given in the same time by the Jersey cow there was made sixteen ounces of butter.

We find the above in an exchange. The test given turned out precisely what any one who has studied the capabilities of the two breeds would have predicted. There is no doubt in the world but what the Jersey is the great butter-making breed, and where butter is the only thing wanted, the Jersey is the animal that is required. But in saying this we say all. In no other respect is the Jersey to be compared with the Short-horn. For dairy purposes, where milk or cheese is the object, the grade or full blood Short-horn or the Holstein, will be found the most profitable breed. We know this from repeated tests by men who supply milk to towns and cities in this State. Not long ago, in conversation with an East Saginaw milkman, in answer to an inquiry as to what breed he depended on in his business, he said he was trying the Holstein. "I have tried the Jerseys, but they won't do at all. They give so little milk, and it will not sell for more than ordinary milk, that it would ruin a man to have a dairy herd of Jerseys. Besides I discovered another thing. If I started out to deliver milk on a warm day, by the time I got around to the last customers the Jersey milk was filled with little globules of butter, and my customers insisted there was something the matter with the cows. Another thing is that while full Jersey milk is the richest by far of any other, I found that skimmed Jersey milk is the thinnest and bluest. It is nearly all butter, and when that is taken away there is nothing left."

We know that this man's experience is that of many others. An old Detroit citizen, now retired from business, was met recently at the Central Yards, looking after a family cow. Knowing he had some Jerseys, we asked what kind of a cow he was after. "Either a grade or full blood Short-horn. I have had some Jerseys, but I can't get along with them. There is too much butter and nothing else. Never have a good drink of milk. They make beautiful butter, but where you want milk for a family you will have to use some other breed besides the Jerseys."

These objections to the Jerseys we believe will be generally concurred in by those who have kept them for use and not as breeders, and will always militate against their being generally kept by the farming community. If crossing native stock with a Jersey bull will add to the milking qualities of the latter, by enriching the milk, the Jerseys may be useful to practical men; but if not, they must be kept only by those who make a specialty of butter-making, in which they probably surpass any other breed.

But let us figure up the returns given above. Say milk is worth five cents per quart. If sold at that figure the Short-horn would have 70 cents per day for her credit, the Jersey 40 cents. If made into butter, which would sell at 30 cents per lb., the Short-horn would have only 25 cents to her credit and the Jersey 30 cents; but there would be nearly 14 quarts of buttermilk in the one case and only eight in the other. Or, let each product be sold in the way it will bring the most money. The Jersey's

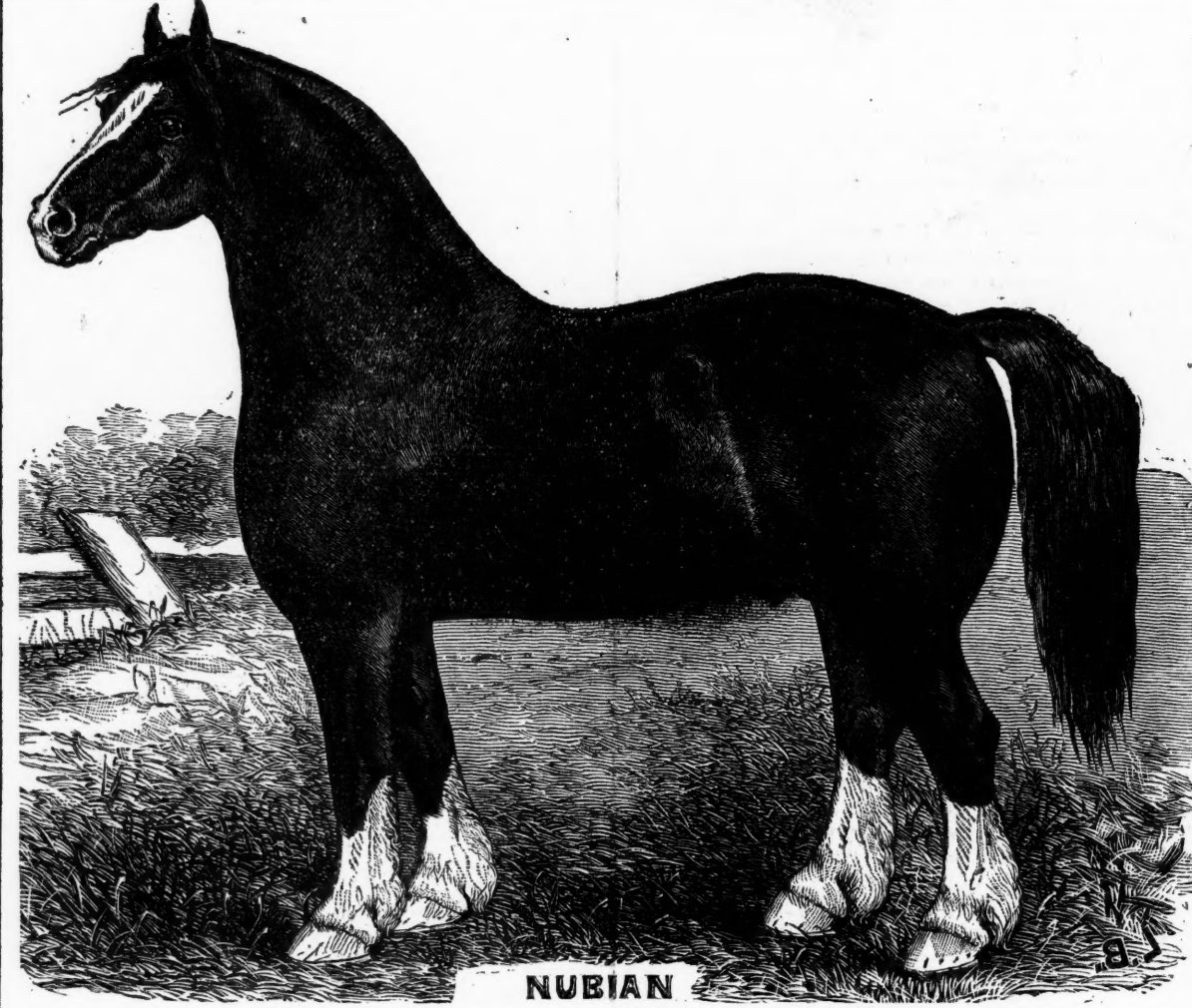
butter would bring 30 cents, and eight quarts of buttermilk at two cents, 16 cents, making 46 cents in all. The Short-horn milk at five cents per quart would produce 70 cents. Jersey men may object to putting the price of their butter at these figures, but it is really better than most of them can do at present, while whole milk sells readily at five cents per quart in this market.

RYE AS A GREEN MANURE.

There are many theories about farming set afloat that seem so sensible when viewed from the standpoint of the theorist, that ultimately become dead failures, that it is no wonder the farmers are averse to accepting new fangled notions of procedure, especially when he is asked to accept a doctrine through faith and not by sight. Those farms are not numerous which do not need enriching in some way. Anything that promises to increase the fertility quickly, which can be certainly and cheaply furnished, is very apt to be accepted as perfection in the agency sought. Rye as a green manure can be easily argued, up to the point of obtaining results. It will grow a large bulk on light soil; it can be easily and neatly turned under with the plow, aided by a chain. These desirable qualities are wanting in clover; that will fail to "catch" on poor soil; and the growth will be light even when it can be coaxed to start. So that it is not to be wondered at that agricultural papers are yearly advising their patrons to sow rye to plow under in a general way, or advocating the practice to some particular correspondent, and yet the practice does not make headway—poor lands are plenty, rye cheap and sure to grow. We must believe that many have tried it, or believe that such advice is a delusion. Why do we not hear of some poor lands being reclaimed, or of some continuous practice that tells of success, or isn't it time to call a halt in this advocacy of rye, corn and buckwheat as green manure fertilizers, and inquire into the reason for their failure, for failure they surely are.

The mechanical condition of heavy clay soils may become changed by turning under either of the above crops grown, but the benefit derived will be from this mechanical change, rather than from the fertility added by their incorporation with the soil.

I was once cajoled into the belief that rye was the ultimate savior for worn soils. I built up a prospective rotation with rye as a green manure for the basis, which was to renew the soil to its virgin state. My faith was such that it crystallized into works. I faithfully carried out the instructions, I sowed the rye in my corn and every kernel grew; my clover had sometimes failed. I pastured it in the fall after the corn was removed, and it seemed to thrive under the inflection; clover would fade away under such treatment. It stood the tests of frosts and freezing while the ground was bare, while my clover was killed. It started early in spring, and by the first of June there was a waving field of green manure, three and a half feet high, which I turned neatly under and worked it during the season so that not a green thing appeared; I was delighted with the experiment. The field of ten acres was sown to wheat with the expectation of witnessing wonderful results from the buried manure. These expectations were never realized; the crop showed no symptoms of receiving any stimulus from the rotted rye. I had another field of twelve acres, eight of which I sowed to rye in the same manner as the other, leaving the four acres to be summer fallowed. I had lost one third of my field in rye as a green manure, and on harvesting the wheat in this field, the other two thirds utterly vanished. After being plowed, the field was worked alike and sown the same day; was seeded to clover and from the date of sowing to the time it was again plowed, no sign of the green manure was visible in the wheat, or in the clover crop which followed it. The lines where the summer fallow and the rye met could never be determined by the growth of any crop since. The benefit to be derived from green manuring must be sought in something beyond the bulk of plant growth furnished to the soil. There must be some affinity in the plant with the forces that nourish crops, to make it valuable as a fertilizer. This affinity, clover possesses, while rye does not. Let us look at its value as compared with clover, as a manurial product. By actual test it has been found that the ratio of root to top in mature rye is as 10 to 138, and in mature clover it is as 10 to 15—the stubble is counted as part of the root. Here we have half as much root as top in the clover plant, and almost 14 times as much top as root in the rye crop. As to the chemical composition of the roots of the two, this difference occurs: In an acre of roots of rye there are 62 pounds of nitrogen, and in clover 180 pounds; of lime there are 69 pounds in the rye and 246 in the clover; of potash there are 30 pounds in the rye, and 77 pounds in the clover root; of dry vegetable matter in an acre of roots of rye, there are 3,400 pounds, and in clover 6,800 pounds, thus from soil only ten inches in depth. Where the rye roots extended only eight inches be-



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ENSILAGE.

So far we have not had much to say in regard to the merits or demerits of the system of preserving fodder known as "ensilage." We looked upon it as rather a dangerous subject, and while the eastern papers were filled with accounts of the brilliant success of those who had tested the system, we preferred to wait for more light than the experiments of one or two seasons could give before deciding on its profitability to the farmers of Michigan. The system is being thoroughly tested, and before long its possibilities must be fully shown forth beyond question. Until that time has arrived, we should not advise a heavy investment in silos, or too much dependence upon a method not yet thoroughly understood. So far the evidence is strongly in its favor, especially in localities where land is dear and labor cheap. In the eastern States it bids fair to accomplish a revolution in the method of preparing fodder for the winter months. Whether it will prove equally as well suited to the system of farming pursued in this State is another question, and one that only repeated tests can fully determine. The test made by Prof. S. Johnson at the Agricultural College last year resulted very favorably, and we are glad to know that it will be repeated. The Professor could do no greater service to the stock men and dairymen of this State than to settle the merits of ensilage food as fodder for fattening and dairy stock. In this connection we give an extract from a recent article in the *Boston Cultivator*, which strongly favors ensilage food for stock, both for its economy and the results that have followed its feeding:

SEEDING IN CORN.

It is often very desirable that ground planted to corn should be seeded with the present crop. It does not often occur that conditions so favorable for seeding happen at this time of the year. The ground now saturated with recent heavy rains, will not probably become very dry again, and clover sown now in corn will stand a good chance to get an excellent growth before winter. In ordinary seasons the dry weather is most severe during this month, and seeding in corn is very precarious business. If the clover comes it makes no growth, or the grasshoppers eat it about as fast as it appears, and the venture ends in disappointment and failure. The earlier the seed can be got in this month the surer will be the prospect of success. If sown before the 15th it will insure it against the vicissitudes of winter, and will make excellent pasture the coming season. If delayed until after the middle of the month, winter rye may be sown with the clover, and by the time the corn is removed it will make excellent pasture for milk cows until snow falls. The rye may be pastured with anything except sheep, (they will bite the young clover too close), sown in the spring and then it will make a crop, and the clover will be large. The corn stalks can be rolled down, or if the corn is cut low the rye can be cut above them. If the land is to be fallowed with wheat the next season it will pay to sow clover seed now, and it will make a heavy growth by the middle of June, when it can be turned under with the corn stalks, and make an excellent preparation for wheat. Those who sow clover in corn this year will not suffer disappointment.

An exchange says: "The idea of teaching every girl to thump a piano, and making every boy a book-keeper, will make potatoes \$7 a bushel in twenty years." So much the better for those who grow potatoes.

"During the years 1880 and 1881 the *Cultivator* had not seen sufficient evidence of the value of ensilage to devote much space to what seemed like extravagant statements on the part of its advocates, or to advocate the claims of the pioneers in this new system. We advised our readers to wait the results of the hundreds of silos built in 1881, except in the case of the few progressive farmers who could afford to make an experiment even at the risk of loss. During the past winter we have spared no pains to lay before our readers the methods, the experiences and the opinions of those practical farmers who would furnish us with the details of their experiments in ensilage. Our readers will bear witness to the fact that we have given the detailed experiments of scores of successful individuals who have tested the system of ensilage. We have given the names and addresses of the parties, with frequent allusions upon the scale which we have set for ourselves. Facts are better than unsupported theories, and the facts in this case are of too great importance to be disregarded by those who should aid progressive agriculture. We have claimed that those individuals who set themselves up as oracles in agricultural matters should first investigate the silos in their own vicinity and learn why they have been so successful, before condemning the whole system."

"To illustrate the unfairness with which certain professed scientists are treating the subject, we would instance the course pursued by Dr. James R. Nichols, member of the Massachusetts State Board of Agriculture, whose official position makes the theories he promulgates the more dangerous, and influences the members of the stock men and dairymen of this State than to settle the merits of ensilage food as fodder for fattening and dairy stock. In this connection we give an extract from a recent article in the *Boston Cultivator*, which strongly favors ensilage food for stock, both for its economy and the results that have followed its feeding:

"No sensible or conservative person will claim that the new system of ensilage is thoroughly understood by any one. The whole industry is in its infancy, but from present appearances it is a very healthy and promising one. Various problems require to be worked out, and numerous questions settled that demand time, patient investigation and long continued experiment. In fact, with our present knowledge, agriculturalists must be content with an experiment of art rather than science. Such eminent investigators as Dr. J. B. Lawes of England, after forty years of the most exhaustive experimenting in certain directions, yet hesitate even now to give positive opinions concerning the very subjects about which we are now so much concerned. What an example to such agricultural prophets in this vicinity as can determine the worthlessness of ensilage without even visiting a silo!"

"In this same condition, what shall we say of ensilage? Simply that science cannot explain or understand it, hence some pretended scientists condemn it, even refusing or neglecting to investigate notable cases of success, depending upon paper silos and imaginary stores of ensilage upon which to found their baseless theories. Is this wise or true in the interests of agricultural progress? What say the practical farmers, those who have tested this system, those who have carefully experimented with this new and promising branch of agriculture? Simply this, that of about 2000 silos, all over the United States, not a single one has proved a failure; not a single one, built upon the suggestions of one season's experience, has proved a disappointment. Isn't such a record quite remarkable, considering the fact that the average farmer is not prepared to make intricate experiments or to test doubtful methods? Would any system of questionable merit meet such an unanimous endorsement from hundreds of impartial and unprejudiced farmers, each working out the problem in his own way, and with but little concert of action? Is it possible that a thousand farmers could fool themselves in this matter of silos, when agricultural professors, members of State boards and other book-learned gentlemen were continually writing and speaking against the whole system, thus giving the farmers timely warning of their presumed incapacity of judging for themselves?"

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praise of Mr. Gale's milk, his cows consume ensilage readily, give a generous flow of superior milk, maintain a most elegant condition in health and flesh. Mr. Gale expects to enlarge his silo capacity this season; is a full believer in the new system, can feed many hogs more stock of the same number of acres than under hay feeding, and thinks he can convince any farmer who is open to conviction of the immense value and advantage of ensilage. "Why don't you convince your neighbor, Dr. Nichols?" we remarked. "He does not believe the feeding of ensilage is any advantage over the feeding of dry fodder." "I am certain I could show him the superior value of ensilage if he would take the pains to investigate it practically, as I have done this winter. He has promised many times to come and examine my silo and the effect of ensilage on my cattle, but up to this time he has never favored me with a call."

SHEEP BREEDING AND THE CARE AND MANAGEMENT OF SHEEP.

[A paper read by H. R. Dewey, of Grand Blanc, at the Annual Shearing held at Flushing, Genesee County.]

Gentlemen and Co-workers.—I did not think when I received this invitation by your honorable committee to appear before you at this time that I should feel so wholly unprepared, so entirely at your mercy. Tick, tick, tick, has the time been marked, and yet not a thought worth a record, other than has been repeated many times over. We are aware that there is nothing new, and knowing this I could not expect that you would require me to give you entire new ideas in the breeding, care and management of sheep. It is impossible to trace matured thoughts upon this or any subject that will be new or original, therefore I shall be compelled in a measure to cover the ground already gone over by some more learned and experienced breeder. The subject as given me by your committee is "Sheep Breeding and the Care and Management of Sheep." I don't understand that I am to consider the breeding, care and management of thoroughbred sheep exclusively, therefore my talk will be more wandering or less definite than otherwise. The importance of sheep breeding and the management and care of flocks is a subject that has received much study both here and abroad. Generations ago it was thought that the sheep had been brought to that degree of perfection on that improvement in the future would be very uncertain. But few farmers comparatively comprehended the full meaning of the term breeder, or the relation of the breeder to the common farmer.

I will ask you to bear with me if I remark upon the breeder while we are looking over this subject, for the breeder and the stock raiser are much in common. He sets himself up as a target among the thousands of jurors to be adjudged. His honesty is in question, and it must stand where you, my fellow breeders and farmers, put it. We are willing to be adjudged by you, to be placed upon the scale which we have set for ourselves. Facts are better than unsupported theories, and the facts in this case are of too great importance to be disregarded by those who should aid progressive agriculture. We have claimed that those individuals who set themselves up as oracles in agricultural matters should first investigate the silos in their own vicinity and learn why they have been so successful, before condemning the whole system."

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"I will leave you to judge how worthless he has proved himself, and cannot leave this subject without speaking of one part of it that has often occurred to my mind, viz., the influence of the occupation."

It is a noticeable fact that you seldom see a successful breeder that is a very passionate, quick tempered, or what is termed a hasty man. On the other hand, they are generally either by nature or by the lessons of the business, careful, thoughtful, mild tempered, patient, yet determined. They are hospitable beyond any class of men I ever met. Of course they have their sparring and petty jealousies, but they are free hearted, and always glad to entertain each other; no matter how unexpectedly chance company may drop in upon them, they are always welcome, always ready to do, go, give, or receive. Now this is no eulogy upon the breeder, but the business—the influence of the occupation. We have been told many times over that the sheep cannot be brought in our debt. It cannot be so said of any other animal. In no other animal are there based so many of those qualities that shall satisfy and supply the necessities of man. Fellow farmers, let us stop just here and contemplate a flock of well-bred sheep. I say well-bred, I mean any sheep that have good forms, good size, and are covered with a good quality of wool. You will not ask me to contemplate a flock with scanty wool and poor constitution, I cannot do it. I never look at such a flock, except in pity. I regard them as you would a sickly, undeveloped growth of anything in nature. There is no excuse for the farmer that has such a flock. A little money, judiciously expended, a little care and management, will put them in that condition of profit that will excel everything or anything that he may produce upon the farm, with less risk. A good animal introduced into such a flock warms the blood, and imparts new vigor and greater worth. The poorly covered carcass of the common grade is by one cross of the thoroughbred made to produce fully one pound more of wool per head of a far better quality, thereby enhancing the value of his get fully one half more than their dams when at their age. For a few dollars the farmer may secure such results, and were the entire number of sheep, and were to make such an effort for any given year, the value of the flocks of Michigan at the present prices of wool and good grades, would be raised from six millions to over six millions seven hundred thousand dollars, estimating that the average flock is worth three dollars per head, and wool thirty-five cents per pound. Now add to that the increased value of the flock for breeding purposes, and they have advanced almost beyond estimate.

The sheep in Michigan are for 1880 reported to be nearly two millions in number, and the average of wool per head is five and forty-five hundredths pounds, when it should and could be of proper care and a little expense, be fully eight pounds per head of a far superior quality. The wool clip of the world has increased five times since 1830, when it was about 330,000,000 lbs. In 1878, the latest year for which there are complete figures, Europe produced 740,000,000 lbs.; River Plate 304,000,000; United States 208,000,000; Australia 350,000,000 and South Africa 48,000,000, making a total of 1,586,000,000 lbs. Great Britain and France each consume about 380,000,000 lbs. per year; Germany consumes about 165,000,000; the United States 250,000,000, and Russia, Austria and other countries combined about 400,000,000 lbs. You will readily see that the United States does not raise or produce by many millions pounds as much as required for her own consumption. Yet in the face of these facts how many times you will hear of men bragging to be careful how they expend money for the improvement of our stock, for in a year or so prices will go down, the over production of wool will knock the bottom out of the whole sheep trade, and you will soon be able to buy plenty of wool for 15 or 20 cents per pound, and sheep for one dollar per head; you know how it was before, etc., etc. Now for this class I can only express contempt; they are the millionaires about the neck of all enterprisers. They are the drones, the cowards in life, and I guess God will punish them; that there might be some of all kinds, or perhaps to sharpen or whet the grit of business men. Now what are the facts? The facts are that the population of the United States is increasing more rapidly than the increase in the production of either sheep or wool. An increase of population a little over 12,000,000 in about ten years.

We were to consider a good flock for a few moments, not the thoroughbred alone but grades, of which there are many fine flocks in Genesee County. Walk out among them and tell me if you can, as you look them over, if there is anything upon the farm that is so safe, so easy to manage and so profitable. What is there that will so surely yield such profit in its annual crop if well cared for as that noble flock of ewes although being very susceptible of good care, they will bear more neglect than any other animal, and recruit quicker with less loss. Storms, cold bleak winds, and frosts may come, that will shiver and depopulate fine fields of grain and fruit, but in their shelter they are secure. It seems entirely useless for me to try to tell how we may secure such a flock, for not one within my hearing but what has a high appreciation and a full knowledge of the profit and value of such animals, and to those that have no taste for fine animals proves that they are imperative to any influence that I could bring to bear upon them. As well might you ask the sailor to hold the plow, or the miner to instruct you in astronomy. This much I will say, we should learn to love our animals, and be willing to compare them, by going to see others of their kind. We should be thorough in what we do, and take pride in it, and there will be no such thought as fail. Let me repeat it, "all animals are just what the breeder and keeper make them, and the keeping is no small part of it. I assure you."

There is no breeder, feeder, stock raiser or speculator that has been successful in obtaining a good flock or herd that has not shown by so doing his ability and judgment. Although I admit that he may not be an experienced keeper yet he shows that he has in his mind an ideal of what his flock or herd shall be. There is no particular way to manage a flock of

(Continued on eighth page)

The Brood Mare.

Training Horses

Horse Notes.

Lucrece responded at the same time, and, although every effort was made to beat her out, the latter won by half a head. In the pools Unalala still continued the favorite at \$18 against \$25 for the field. Lucrece took the head at the turn and held it, closely pressed by Unalala to the half-mile. Then the favorite went to the front by half a length, but when well into the homestretch Flora F.

A Wise Word From Addison.

The Farm.

OUR FRENCH LETTER.

PARIS, July 22, 1832

OPEN: OF THE FARM.

AGITATION IN PERI-TRAUMATIC*

A FORCE PUMP.

HARVEST IN SOUTHERN FRANCE

CONCLUSION OF AMERICAN PORK.

COMPRESSING HAY.

PRESERVING MATTING.

Breeding In:And In.

Another Possibility of Cotton Growing.

ulated Major Jones, of Georgia, a progressive farmer and stock raiser, and he has corroborated Mr. Atkinson in his claims. Should this new use for cotton prove practicable, we fully agree with Bradstreets that it will not only open the way for the establishment of another important industry in the south, and add greatly to the

English and American Agricultural
Machinery in Russia.

can be covered deep in screened dusting material of some sort. Birds kept on concrete flooring without these precautions,

The yards should be disinfected with carbolic acid as a measure of prudence, and for the same reason it is better to separate the sick from the well fowls, although the disease is not proven contagious." Any treatment to be effective, must begun at an early period.

the largest and choicest importations ever brought to this country. Every animal selected by a member of the firm in person, and all from the deepest milking families. It will pay every buyer to see

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R. C. KEDZIE,
Prof. Chemistry, Agricultural College



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be published in the MICHIGAN FARMER and that such publication be continued in such paper at least once a week, for six weeks in succession.

WILLIAM J. CRAIG

On the fifth day of December, 1883, and in default thereof that said bill be taken as confessed by said Dennis F. McCarthy. Further ordered that within twenty days complainant cause notice of this order to be published in the MICHIGAN FARMER, and that such publication be continued in said paper at least once a week for six weeks in succession.

WILLIAM J. CRAIG,
Circuit Court Commissioner,
for Wayne County, Michigan.

RALPH PHELPS, Jr.,
Solicitor for Complainant.

AUGUST

Hor

RIPENING OF

Notices of New

Arnold's Pride cross of the foreign Wilson's Albany, of Ontario. (See by the originator unusually vigorous season produced fruit. The blossoms very large; irregular; cockscomb; dull moderately juicy and pleasant. From a variety for market of one hundred. It is a late bloomer escaped injury from spring. Ripe June 24th.

New Continents growing variety, bearer so far. Pical, rounded; very moderately juicy; and peculiar looking. Crispie, like the from New Jersey moderately vigorous; perfectly, but bears of male; fruit of medium ovate, pointed; dark sub-acid. The foliage partially Alpine than Trinity also come of its parentage.

er, brownish slightly large crop of fruit; large, but variable; conical, irregular; pasty; mild, pleasant; productive on rich soil.

Piper's Seedling, originating with D. Hardy, very vigorous Staminate; fruit round; glossy scarlet; moderately juicy, sub-acid original locality. June 24th.

Kinney's Eclipse, ling, is a little affected by vigorous and Staminate; the medium conical, slightly irregular rather firm, juicy, value. Ripe June 24th.

Huddelson's favorite ling, originating in a cross of Agriculture, browns a little underous; a thin bearer broad, roundish scarlet; of medium mild subacid, very superior variety, would be nearly desirable if not June 24th.

Les Quatre Saisons with small regular abundance of small itself will give very late. The fruit is very conical; bright crimson from the calyx in juicy, mild sub-acid. Mexican Everbearing productive. Ripe June 24th.

Mammoth Bush is Caywood & Son, of exceedingly strong right, growing in very without runners; it is blossom pistillate; fruit conical, often combed; bright crimson, sub-acid, wish to grow this fruit this an admirable variety. Ripe June 24th.

Brant's Giant is Durand's origin slightly, but is moderately profuse bearer; staminate irregularly ovate crimson; firm, very brighter colored than wise much like it; attractive, but slightly late. 24th.

Belle Bordelais is a pine variety, varying all from Les Quatre Saisons and like it unworthy but the curious. Ripe June 24th.

Brilliant, as the attractive looking variety to say, with little else originated in Ohio in hardy and vigorous, but late; fruit small to conical; bright scarlet mild, pleasant sub-acid.

Agriculturist, Carol Early Adella, Luckh Jacket ripened also of which we must of the FARMER of Alpha, as well as Ida, and Maggie, and Charles Arnold, of Ohio sowing the seeds of with pollen of the Nicaise; the seeds from seedlings was again so varieties named are his thousand seedlings of ing. These have now fore the public.

Of Alpha the origin the earliest of all large excellent flavored berry." With us another required to properly de the plants barely survive.

A respectable strawberry posed to ripen on Sunday to look them on

Prairie Queen com

MICHIGAN FARMER

State Journal of Agriculture.

A Weekly Newspaper devoted to the industrial and producing interests of Michigan.

JOHNSTONE & GIBBONS, Publishers.

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The Michigan Farmer

State Journal of Agriculture.

DETROIT, TUESDAY, AUGUST 8, 1882.

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WHEAT.

The receipts of wheat in this market the past week have been 130,946 bu., while the shipments were 28,390 bu. The visible supply of this grain on August 2 was 13,570,941 bu., against 16,772,508 bu. at the corresponding date in 1881. This shows an increase over the amount in sight the previous week of 2,627,073 bu. The exports to Europe for the week ending August 2 were 3,479,745 bu., against 1,609,899 bu. the previous week, and for the past eight weeks were 10,440,141 bu., against 14,583,553 bu. for the corresponding eight weeks in 1881. The stocks of wheat in this city on Saturday amounted to 173,035 bu., against 88,017 last week, and 109,884 bu. at the corresponding date in 1881.

The weather of the past week has had the effect of strengthening spot wheat, and also of making sellers very careful of letting out lines of futures. The big crop which all felt was a certainty in this State is not yet beyond the reach of disaster, and in many instances disaster has come. In the northern tier of the wheat growing counties, such as Lapeer, Genesee, Clinton, Ionia, and others further north, a great deal of wheat has been exposed to the rains of the past week. We also hear from Livingston, Ingham and Washtenaw Counties that grown wheat is quite plenty. At Lansing some wheat in the shock shows quite green, the sprouts frequently being two inches in length. While this is so in Michigan, the neighboring State of Wisconsin has suffered to an equal degree. It is as yet impossible to tell how great the damage has been, or that the weather is going to be such as will allow that not yet affected to be secured. The air is very damp and warm, and in such a temperature, after the thorough wetting it has had, wheat will sprout very quickly. Still, we note that many are so anxious to get rid of their crop that they are marketing it at 92c to \$1 per bushel. It is also an established fact that wheat is not turning out when threshed, the berry in many instances being badly shrunken, and the yield far below the promise before being harvested. In this market old No. 1 white has been in demand at steady prices, ranging about \$1.15 per bu., and old No. 2 at \$1.10. New wheat, of which the receipts mostly consist now, was quoted on Saturday at \$1.07, and No. 2 red at \$1.05.

The following table exhibits the daily closing prices of wheat from July 31st, when new wheat began to arrive, to August 7th:

	White No. 1	No. 2	No. 3
July 31st	1.00	0.95	0.90
Aug. 1st	1.00	0.95	0.90
2nd	1.00	0.95	0.90
3rd	1.00	0.95	0.90
4th	1.00	0.95	0.90
5th	1.00	0.95	0.90
6th	1.00	0.95	0.90
7th	1.00	0.95	0.90

Futures have shown more strength the past week, and there has been less desire among dealers to operate owing to the many contingencies to be taken into account when the future of the market is to be considered.

The following table gives the closing prices of the various grades of wheat for the past week:

	Aug.	Sept.	Oct.	Nov.
Tuesday	1.03 1/2	1.03 1/2	1.03 1/2	1.03 1/2
Wednesday	1.04	1.04	1.04	1.04
Thursday	1.04 1/2	1.04 1/2	1.04 1/2	1.04 1/2
Friday	1.05	1.05	1.05	1.05
Saturday	1.05 1/2	1.05 1/2	1.05 1/2	1.05 1/2
Monday	1.06 1/2	1.06 1/2	1.06 1/2	1.06 1/2

The foreign markets are generally firm, although no advance is yet noted. The export demand shows a decided improvement, exports jumping up to 3,479,745 bushels the past week against 1,609,899 bushels the previous one. This shows that foreign buyers are quite willing to stock up at present rates, and they are taking advantage of the depressed condition of the markets on this side of the Atlantic to do so. The daily press reports published in this country are all of the same tenor, predicting more wheat than can be got rid of, but now and again a few plain facts come out that show how much truth there is in some of these estimates. Such, for instance, is the following from a correspondent of the Chicago Times at Casselton, Dakota Territory:

"It is somewhat disgusting to the average farmer in this country to read the newspaper reports of crops and prospects of large yields in the territory. Some reports claim 15,000,000 bushels last year. The correct figures are about 3,000,000, and it is safe to say that the present crop will not exceed that of last year. The average in Cass County will not exceed ten bushels per acre, and this is the very cream of the wheat district on the Northern Pacific railroad. We do not expect to be correctly reported by our local papers, or telegraph operators, or railroad companies, but we do expect that if the facts reach the Times they will be so reported. If other wheat-growing sections are as much overrated as Dakota Territory is, what will be higher next spring than it has been for many years. Harvest will not commence here for two weeks, and the weather has got to be the best, and no hoppers, to insure a full crop."

The latest estimates published give Dakota territory a crop of 12,000,000 bu., and Minnesota 38,000,000 bu.—a total of 50,000,000—and we think one will turn out just as true as the other. But misrepresentation has been the rule this season ever since early spring. Before the snow was off the ground, the papers were shouting themselves hoarse over the magnificent promise of spring wheat in the northwestern States. There was some sharp snow storms afterwards, and the next thing reported was that nearly all the wheat had been got in. The truth was the farmers had not been able to do any plowing when the first reports were sent out. It may have been done to sell land up near the north pole, but all the same it was used to depress the wheat market and scare holders into selling.

So far as we can learn the crop is not going to be as large as anticipated, while the wants of Europe are going to be heavy. With every chance for a war between Great Britain and some of the Continental powers, and poor harvests the rule in the United Kingdom and parts of Europe, farmers should be careful about sacrificing their crop. It will all be wanted, and at better prices, we believe, than are now ruling.

The following table gives the prices of breadstuffs in the Liverpool market on Saturday last, as compared with those of one week previous:

	Aug. 5.	July 29.
Flour, extra State	33s. 3d.	33s. 3d.
do do do	32s. 6d.	32s. 6d.
do do do	32s. 0d.	32s. 0d.
do do do	31s. 6d.	31s. 6d.
do do do	31s. 0d.	31s. 0d.
do do do	30s. 6d.	30s. 6d.
do do do	30s. 0d.	30s. 0d.
do do do	29s. 6d.	29s. 6d.
do do do	29s. 0d.	29s. 0d.

Later.—This morning's mail brings reports of heavy damage to wheat in Oakland, Calhoun, Barry, Eaton, Montcalm, and Kent Counties. In some counties outside the crop has been exposed to the rains, and will be nearly a total loss. The amount damaged will be millions of bushels. It will be a week before a full report of the losses can be gathered.

CORN AND OATS.

The receipts of corn here the past week amounted to 13,949 bu., and the shipments were 2,000 bu. The visible supply in the country on July 29 amounted to 6,274,043 bu., against 15,928,011 bu. at the same date last year. The export clearances for Europe the past eight weeks were 689,470 bu., against 17,127,432 bu. for the corresponding eight weeks in 1881. The visible supply amounted to 36,412 bu., against 252,089 bu. The stocks now held in this city amount to 36,412 bu., against 252,089 bu. at the corresponding date in 1881. Corn has been neglected the past week, and prices have dropped to 70c per bu. for No. 2. The fact is prices are so high that no one cares about buying a bushel until forced to do so. There is no export demand, as rates are highest on this side of the Atlantic. Every one is waiting to see what the next crop will amount to. Quite a number of reports have been received from Indiana, Illinois and Iowa that the chances are yet good for a fair crop. Some of our Michigan papers are talking the same way, but it will puzzle farmers to know where they get their information from. The fact is old corn will be cleaned out before the new crop is available, and it is going to be less than that of last season—and don't you forget it. Last year's crop was supplemented by a large surplus from that of 1880, and it is easy to judge what the result would have been had granaries been as bare as they will be this season. It is easy to arrive at a conclusion by putting these facts together. The Cincinnati Price Current says:

"Nebraska, Iowa, Illinois and Indiana, as well as Ohio, there is now no doubt that a large corn crop is possible, and about the only drawback from a certainty is the danger of an early frost; but if the progress toward maturity should be rapid during the ensuing month as it has been during the last week the crop will be out of danger in the great corn belt and quite forward in the more northerly latitudes. In Kentucky, Tennessee, Missouri and Kansas, the crop is about as good as made, and in the southern states the harvest has already commenced. The great improvement which a few days of highly favorable weather made in the condition of the growing corn renders it probable that a week will show much out of date. The present prospect is that there will be more than an average yield in Kansas and Missouri, south of the latitude of Springfield, Ill., Indianapolis, Ind., and Columbus, O., with probabilities in favor of more than an average in regions further north. With these prospects realized, it follows that there will be plenty of feed to make fat hogs and cattle, so that the condition of the live stock to be marketed the coming winter will doubtless be better than usual, and all available stock will be prepared for the winter packing season."

We give place to the above to show what a precious lot of stuff it is possible to get

people to swallow, and to place it on record for reference hereafter. In Chicago spot corn sold on Saturday at 70 1/2 to 70 3/4 per bu., and with a weaker feeling. Futures sold at 70 1/2 to 70 3/4 for August delivery, 70 1/2 to 70 3/4 for September and 70 1/2 to 70 3/4 for October. The Liverpool market is quoted steady at 7s. 3d. per cwt. for old mixed, against 7s. 2 1/2 for one week previous.

Oats were received here the past week to the amount of 14,348 bu., and the shipments were 1,743 bu. The visible supply of this grain in the country on July 29 was 1,267,067 bu. against 7,873,806 bu. at the corresponding date last year. The stocks held in store here on Saturday were 3,963 bu., against 10,100 bu. the previous week, and 2,916 bu. at the corresponding date in 1881. Receipts have been light, and cash oats have ruled firm with an upward tendency all week. Prices are again higher, No. 2 white selling at 64 1/2c per bu., and it was difficult to secure supplies even at those figures. In futures September sold at 38 1/2c per bu., but we doubt if supplies are secured at that price. In Chicago the market is very firm, another "corner" having been developed, and prices are advancing. Old are quoted at 57 to 59c per bu., and new, a few of which have appeared on the market, at 51c per bu. For August delivery the rates are 49 1/2c, for September 37 to 37 1/2c, and for October 36 1/2 to 36 3/4c per bu. Reports from the growing crop are still very favorable.

HOPS AND BARLEY.

Hops are still a most interesting topic to a number of people, and the course of the market, reports from the growing crop, and advices from abroad are closely watched. The weather of the past week, warm, rainy and muggy—must have proved unfavorable to yards in both this State and Wisconsin, but as yet we are without data to judge of its effects. The markets east are very firm, although the high rates asked have scared off buyers, many of whom, like the man outside of the ark, don't think it is going to be such a terrible shower after all. In New York prime hops of '81 are quoted at 50 to 52c per lb., but we know of one Detroit man who purchased 15 bales the past week in that market, and was notified by telegraph that the price was 55c. He "kicked," but the next dispatch told him he could resell them at 57c. He dropped into the Farmers' office for information, and finally concluded to hold the hops. In parts of the New York district, hops have appeared in quite formidable numbers, and this is just the weather suited to them. It would be a serious affair if the yield in the "Kent of America" should be cut down to any extent by their ravages. In regard to the New York market the Bulletin says:

"Actual business is moderate at present, buyers and sellers appearing slow to make any decided move. There is not the least indication of holders relaxing their grip, however, they evidently feeling satisfied that all stock unsold will be required before new hops come in. Letters from Otago County report an attack of lice on the vines in that county, but as yet no serious damage. We hear of a case where a ship per lost one lot of goods by offering to sell at 45c, as a 'bluff.' This is a very good indication of how the market stands. Telegrams from San Francisco reports bids of 45c for growing crop by a New York dealer."

Prices in that market on Saturday last were as follows:

N. Y. State, crop of 1881, choice	50	42 1/2
do do do medium	48	40
do do do low grades	45	38
do do do crop of 1880, good to prime	42	35
do do do low to fair	40	33
do do do old	38	31
do do do crop of 1881, fair to choice	35	28
do do do low to fair	33	26
do do do old	31	24
do do do Pacific coast	30	23

W. H. & H. E. Le May, of London

England, in their circular of July 29, say: "Prices continue to advance, and the whole of the very limited stock is now in about a half dozen hands. There are buyers for the lowest English hops at 42c per cwt., and for anything with color and quality at £10. One or two of the holders refuse to sell anything below £12 to £15 per cwt., according to quality, as they consider the present prospect of the new crop warranted at least these prices. Never has such a bright been known; the few grounds that looked like growing a small crop are now estimated to produce not more than a pocket to the acre. They have produced nothing but blind bane, and are again swarmed with fresh vermin. Thousands of acres will not produce a pound of hops. We shall be fortunate if we get £30,000 old duty, or say 40,000 pockets; our annual consumption is 600,000 ewts., or 400,000 pockets, and there is fifteen months' trade to be done before there will be a chance of getting another English crop. All circumstances point to unprecedented high prices."

There were neither receipts nor shipments of barley in this market the past week, and not a single sale reported. The interest is generally centered in the growing crop, which is in a decidedly tight place at present. The warm, muggy weather must have discolored it badly. Reports from Wisconsin and Minnesota state that the continued rains have greatly injured it in those States. The amount of this grain in sight is 73,364 bu., against 124,808 bu. at the corresponding date in 1881. The only market in which there is any movement is Chicago. In that market prices are firmer than for some time, and tending upward. No. 2 is quoted at 88 to 89c per bu. for September delivery, and No. 3 at 70c. For spot 55c per bu. was paid for No. 5, and 68 to 70c for No. 3. The reports from the growing crop are very meagre, and there is evidently less of this grain grown in Michigan than some years ago.

DAIRY PRODUCTS.

The unfavorable weather of the past week has affected the butter market, as receivers are always anxious to work off stock at such times, and the result has been a decline in values. It is difficult to get more than 20c per lb. for the choicest offerings, while the lower grades are neglected. At 20c per lb. butter-making does not pay as well as cheese-making at present; but if a good article is made and carefully packed, so that it will retain its flavor and freshness, butter-makers can find certain of a reward more commensurate with their labor the coming winter. It is difficult to get butter into the market during such weather as prevailed the past week in good condition, and buyers are always more particular than at any other season. The

Chicago market is weak and lower under heavy receipts, stocks showing a steady accumulation. Quotations there are as follows: Fancy creamery 22 to 23c, fair to choice 20 to 21c, choice dairy 19 to 20c, and fair to good at 16 to 18c per lb. In New York the market is dull and weak, but so far prices have been maintained on stock of good quality, fancy State creamery being quoted there at 25 to 26c per lb, choice creamery at 24c, fair to good at 22 to 23c, and ordinary at 20 to 21c. In its review of the market the Commercial Bulletin of Saturday says:

"As indicated by our reports for a day or two past, the line of demarcation on quality has become more sharply drawn and tone varied accordingly. Strictly fine fresh flavored goods met with the usual local call and some out-of-town demand, and with lighter receipts, buyers were pretty quick operators when they found what they desired, giving up the preference in all cases. Right at this point, however, all advantage to the seller ceased, and, with further additions, the great bulk of the supply (nine-tenths of the butter) is in even a worse position than a week ago. It is even the acme of the confusion of the immense accumulation, filling pretty much every ice-house beside a large amount of cellar storage capacity. Many answers suggest, 'make shippers take it,' but shippers won't listen to negotiations at anything like the rates now given as representing valuations, while holders stand agast at the sacrifices apparently absolutely necessary in order to reach the views of customers. In the meantime, the carrying of stock against holders has scored one more point against holders in the matter of quality, and given buyers additional power to squeeze more favorable terms. It may be that something is to be gained by carrying in the face of the adverse influences, but it is very difficult to find arguments on that side of the question."

Western butter is steady, and is quoted in that market as follows:

Western imitation creamery	19	33
Western dairy, choice	20	34
do do do medium	19	33
do do do low to fair	18	32
Western factory, choice current makes	17	31
Western factory, fair to good	16	30
Western factory, ordinary	15	29

Cheese stands the hot weather racket much better than butter, and "steady and unchanged" is the usual answer to questions in regard to the states of the market. State cheese of the best makes commands 12 to 12 1/2c, and second quality at 11 to 11 1/2c per lb. Very little cheese is now sold in this market from other States. Our Michigan manufacturers have full control of the trade, and maintain the position by the superior quality of their goods. The leading grocers, who formerly sold New York and Ohio cheese, now sell Michigan nearly exclusively, and say there is nothing else that suits their customers so well. Cheese has advanced in price since factories were started in the State from the fact that the people have become educated to its good qualities as an article of food. The scarcity and high prices of meats the past year has also aided materially in making a good demand for cheese. Those who use it are also more particular in regard to its flavor and quality than formerly, and it is this discrimination that has given Michigan cheese-makers one of the steadiest and best markets in the world for the sales of their products. The hot weather has not affected the markets to any extent, and in Chicago prices are as follows: full cream cheddars 10 to 10 1/2c; part skim choice do, 8 to 8 1/2c; part skim flats, choice, 7 to 7 1/2c; common to fair skims, 5 to 6c. In New York the market has ruled stronger for stock of finest quality. Quotations there are as follows: Fancy State factory, 11 to 11 1/2c; choice State, 10 1/2c; fine do 10c; fair to good do, 9 1/2 to 10c; fair to good do, 8 to 8 1/2c. The N. Y. Bulletin of Saturday says of the market:

"On Tuesday's market matters are somewhat unsettled, but there is certainly no further gain of strength, with some of the trade calling matters a little 'off.' The truth is, however, the really steady state of having about all been picked off, the situation on the bulk of the supply is better revealed, and former extreme quotations become exceptional. A strictly dead white perfection of quality would bring 11 1/2c could it be secured. It is not the top of the market for anything now left, and some pretty nice colored lots sell for less. We hear also that a much closer examination is given goods this morning, with faults found on many lots that on a quick market would pass without an objection. Medium and low grades of factory are quite dull and heavy, and eight skims in many cases are quoted down as low as 9 to 9 1/2c for goods formerly held at 9 to 10c."

The Liverpool market is quoted dull at 56s per cwt. for choice American, the same figures as one week previous.

WOOL.

There is a lull in the wool markets of the country at the moment, and the quietness will probably last until the heated term is over. The receipts of wool from the west continue large, and manufacturers, who have secured stocks for the present, are not in the market in such numbers. Those that are limit their purchases to actual wants, not caring about carrying large stocks when they have not a sure thing of making something respectable out of the investment. Besides, by holding off, some of the dealers may be forced to realize, and a chance thus offered to secure stocks at even better rates than now prevail. But we note that the market for woolen goods in showing a better tone, and it is well known that stocks are sold up much closer than a year ago. The advent of cooler weather will make a decided difference in the position of affairs, especially as staple cotton goods are working upwards, and held very firmly. During the past week there has been a falling off in the amount of business done in the Boston market, the sales being 2,388,400 lbs domestic and 161,000 lbs foreign, or 2,499,400 lbs in all, vs. 3,744,300 the previous week, and 2,036,050 lbs for corresponding week of last year. Prices are unchanged and the market steady. The prices in that market are quoted at 40 to 42c for Ohio X and XX, 44 to 46c for fine delaine, 39 to 40c for Michigan X, 46 to 47c for No. 1 washed combing, 35 to 36c for medium unwashed Indiana and Virginia clothing, 27 to 27 1/2c for medium Kentucky unwashed combing.

The Boston Commercial Bulletin has this to say of the market:

"Although the statistical position of the wool market at this point is fully as strong as a year ago, yet some dealers are pressing their wool for sale, and the week's trade

has been rather irregular among the different houses, both in amount and in price. A good deal of Michigan X has been sold at 39c, and some dealers insist that that is a full price for it, while other say they have not sold any at less than 40c. We report considerable transaction at both these figures. Ohio wool is not much higher than Michigan (the clips of the two States having approached nearer in condition this year than ever before), and a lot of good Ohio X which was offered at 41c was refused, the buyer having obtained another lot elsewhere for less money. Combing and delaine selection have been in good request at previous prices. There is no material change in medium unwashed wools. A very choice 3 to 4 blood clothing will bring 34 to 35c; but the bulk of good medium unwashed wool sell at 30 to 35c, according to condition."

MICHIGAN'S FLYERS.

The Race at Buffalo between Jerome Eddy and Black Cloud for a Special Purse.

On Thursday last these two Michigan stallions met at Buffalo to contest for a special purse of \$1,500, made conditional that Saugger's best time, 2:15 1/2, was beaten. The track was not a fast one by any means. At the start Eddy had the call in the pools at \$100 to \$74. In the first heat Black Cloud took the lead and maintained it by two lengths to the half, then Eddy came up rapidly, and at the three-quarters was neck and neck with the black. Into the stretch he began forging ahead, and won very handsly in 2:16 1/2. Eddy now was favorite at \$50 to \$8. The start was a good one, Eddy again seemed satisfied to hug the black's wheel until the upper turn, when he made a rush for the front. Down the stretch they came neck and neck, but at the distance stand he left his feet, and Black Cloud won by a length in 2:18 1/2. Eddy was now the favorite at \$60 against \$30. On the lower turn the pace was too fast for the favorite, and he ran clear around the turn, settling down to work at the quarter six lengths in the rear. He waited till the upper turn again, when he closed on Black Cloud, beating him under the wire by a head. It was, however, on account of Eddy's run, declared a dead heat, and no time given. The fourth heat was trotted without a skip or break. Black Cloud took the lead on the turn, and held it by two lengths to the half. Then Eddy came up, and they trotted neck and neck home. The heat was also declared a dead one, and on account of darkness the race was put over till the next day. The time in this heat was 2:10.

Friday at one o'clock the horses were promptly on hand. Eddy was still the favorite in the pools at \$50 to \$40. The send-off was an excellent one. At the quarter, in 35, Black Cloud had a lead of six open lengths. This was gradually closed up on the stretch, and at the half, in 1:10, the black had the best of it by an open length. Then Eddy was called on and closed up on the black, passing the third quarter in 1:44 neck and neck. The black proved too fleet for the bay on the stretch, and passed under the wire the winner by half a length. Time, 2:20. For the first time Black Cloud had the call in the pools at \$50 to \$16. The word was given to a magnificent send-off. At the quarter, in 35, Eddy was a length in the rear, and trotted a waiting race to the half in 1:10. Eddy went into the air when just entering the turn, and Black Cloud won very handsly. Time, 2:18 1/2. The race was one of the closest contested and most exciting events seen on the Buffalo track in years.

THE RACES AT EATON RAPIDS.

The races at Eaton Rapids the past week attracted a very fair attendance despite the rainy weather and the fact that farmers were busy with their harvest. The judges deserve credit for the impartiality and fairness of their decisions, which was in agreeable contrast to one or two of the other meetings I have attended this season. Among the new horses worthy of mention that appeared at this meeting was a fine black gelding named Wm. S. He was driven by his owner, Wm. Smith of Eaton Rapids, and barring accidents will make a good one. He won the 3:15 and the 2:37 races, vanquishing in the latter such horses as Lady Kern, St. Louis, Pathfinder Jr., George R. and several others. He has a record of 2:32 1/2, made at the Charlotte meeting.

One of the events of the meeting was the half mile running race, in which Lady Mitchell, Jennie G. and Boston were entered. It was fixed for Boston to win the race, but the owner of Jennie G., who knew Lady Mitchell had a sure thing if she was given her head, bought some pools on her. When he saw her hold in to give Boston first place, he pushed Jennie G. ahead of him, and thus compelled the rider of Lady Mitchell to either win the race or let him take first money. She won the race of course, and Jennie G.'s owner won his pools and second money.

The 2:30 class had seven entries, and was won by Lookout Jr., Mollie Middleton getting second money and Plint third. The time of the best heat was 2:39 1/2. The 2:21 class for pacers had five entries. There were five heats paced. Bay Jim taking the last three and first money, High Jack second, and Felix third. The fastest heat was made in 2:34.

The frequent showers of course prevented any fast time being made, but on the whole those in attendance were well pleased with the management of the meeting.

The past week we had a visit from the Secretary of the North Branch Agricultural Society of Lapeer County, Mr. F. S. Porter, who was in the city on business connected with the Society. He reported the Society in excellent shape, and the prospects for the coming fair, to be held October 4, 5 and 6, very promising. The officers of the Society are Harrison Bradshaw, President; John C. Wade, Vice President; F. S. Porter, Secretary; and A. S. Sholes, Treasurer.

CREDIT TO WHOM CREDIT IS DUE.

To the Editor of the Michigan Farmer.

The Breeder's Gazette of January 28th 1882, contained an article referring to a late exportation of Merino sheep to Australia, the selection of Mr. Wm. G. Markham of Avon, New York, which claimed for Gen. John S. Go. of Brownsville, Pa., the credit of making the first exportation of Merino sheep from the United States to Australia, and that this was made in 1878.

Knowing that Mr. John D. Patterson, a breeder of thoroughbred Merino sheep, formerly of Western New York, afterwards in California, and whose flocks have lately been removed to Navarro and Tom Green Counties, Texas, had at different times and several years previous to this date made consignments of Merino sheep to Australia and New Zealand, I wrote him for exact information, but owing to his absence from home, I have but lately received a reply. The following letter which I have permission to copy, explains the whole matter and can be relied on as being correct. I send for publication in the interest of justice and exact history:

No. 8 Davis St., San Francisco, Cal., June 27th, 1882.

Mr. J. D. Patterson, Some time since my brother, Mr. J. D. Patterson, handed me your letter making inquiry in regard to exportations of Merino sheep from his flock to Australia or New Zealand. In reply I will say, that I have had charge of my brother's sheep on this coast from January, 1880, to within a few years, and am conversant with all shipments of sheep from his flocks, from both Pacific and Atlantic ports. Having this knowledge, my brother requested me to answer your inquiry on this point, which I am able to do as follows:

In the fall of 1861, J. D. Patterson shipped from Boston, Mass., twelve rams and some ewes, both Spanish and French Merino, to parties in Australia. In 1864 he shipped from San Francisco twenty-five Spanish and French Merino rams to parties in New Zealand. In 1865 I shipped from San Francisco thirty Spanish and French Merino rams from my brother's flock, to a Mr. Graham of New Zealand. In 1866 I sold from his flock to Messrs. McKerr & Campbell fifty Spanish Merino rams, and 3 French Merino rams, which they shipped from San Francisco to Australia.

In 1874 twenty rams were sold from the same flock

Mr. J. Crapper, of Grand Blanc, has threshed his wheat, and reports a yield of over 25 bushels to the acre.

The next regular meeting of the Macomb County Pomona Grange will be held at Washington, on the 9th of August.

The Battle Creek Park Driving Association will hold a race meeting August 15, 16 and 17, following the one at Marshall this week.

Rev. M. Day, of Ann Arbor, expressed 30 bushels of Cutbert Raspberries to Detroit, recently, for which he received \$3 a bushel.

A rumor is in circulation that Vanderbilt has cobbled up the Jackson and Fort Wayne Railroad. It would be a bad thing for Jackson.

The Midland Republican tells of a farmer near there that has corn seven feet high. There won't be many stories like that this season.

Mr. L. L. Leggett, of Tompkins, Jackson County, was gored by a Jersey bull last week, and came near losing his life. The bull has been killed.

Wm. Annis, a farmer of Cascade, Kent County, has been held for trial in the Superior Court of Grand Rapids on a charge of uttering a forged note.

The State Teachers' Institute for Livingston County will be held in Fowlerville commencing Monday, August 21st, and continuing until the Friday following.

Sheep-killing dogs seems to be increasing in numbers in this State. Reports of their ravages comes from four or five different counties the past week.

The people of East Saginaw are greatly divided over the passage of the river and harbor bill. About \$125,000 is appropriated for improving the Saginaw River.

Battle Creek Journal: Hon. James S. Upson sent the first load of wheat brought to this market to Titus & Hicks' mill July 29th, and received ninety cents per bushel for it.

H. D. Hugh, a farmer living a few miles from Lansing, had a barn burned Sunday of last week, losing his entire crop of wheat and hay. The fire was caused by children playing with matches.

On the night of August 3d a heavy storm did much damage in the vicinity of Saranac. All the mills and bridges on milk creek, several buildings, lumber and other property were swept away and the crops in the township badly damaged.

The State troops to be encamped at Brighton will need 30 head of cattle every other day, and 1,000 pounds of chickens. During the week the boys only got the beef they always ready to supply the chickens themselves.

Jackson Citizen: The first new wheat marketed in this section, was threshed by Mr. Sidney Smith, of the town of Brighton. The quality is pronounced very fine, berries being large and of a very light color, and it is thought will grade extra. It was bought for \$1 a bushel.

James Mannion, a "crook" of this city, has been arrested at Kalamazoo. Jim is a bad citizen. He is a native of Detroit, of a respectable family, and learned the printing business. He has been notorious as a thief and robber for the past eight years. A man named Malloy was arrested with him.

The last week has made certain a good corn crop. It will not surpass in quantity and quality all precedents, but it will be sufficient to fill our needs, and leave millions upon millions of bushels to feed the starving nations, if any such there be.—*Jackson Citizen*.

Isn't our contemporary a little too previous? Will editor walk over to the nearest corn field and report just how it looks?

Flint Globe: Mr. Wm. Coleman, on the Maxwell Thompson farm, a mile south of Mundy Center, threshed seven acres of wheat last week, which yielded 231 bushels to the acre. On the same farm were over 40 acres which it was thought would yield as much or more per acre as the seven acres that was actually harvested, and the balance stood up well.

The third annual reunion of the Lapeer County Veterans' Association is to be held at North Branch, on Wednesday and Thursday, August 16 and 17. The exercises will consist of music, speeches, reading, etc. Among other speeches will be delivered by R. V. Langdon, Esq., Gen. L. S. Trowbridge, Gen. L. Spaulding, Major Paul Moberly, Gen. E. B. Richardson and Hon. John T. Rice. All persons who have at any time served in the army and navy of the United States are cordially invited to attend.

General News.

The revenues of Mexico show an increase the past year of \$4,500,000.

The July wheat crop in Chicago is likely to result in much litigation.

Gold has been discovered in paying quantities in Bedford County, Virginia.

It is said that 50,000 watermelons are shipped north from Atlanta, Ga., daily.

Last week there were said to be 3,700,000 bushels of grain in Chicago elevators.

President Arthur proposes to make a visit through the Western States in September.

A number of Egyptian orders for powder are said to have been filed by New York firms.

Mrs. Bigley, of Westmoreland County, Pa., has gone into silk culture on her own account.

There is said to be no hope of Sergeant Mison's pardon during the present administration.

There is to be a national convention of Mexican war veterans at Nashville, Tenn., Sept. 13, 14 and 15.

The appropriations made by Congress at this session exceed those of last year by nearly \$80,000,000.

John Russell, aged 74, was chloroformed in a circus at Mason City, Ia., Friday night, and died at 11:30.

A committee at Toledo is trying to raise \$30,000, to secure the location of the Licking Rolling Mills there.

The coinage of the mints of the United States for July was \$3,153,850, of which \$2,100,000 were standard dollars.

The Anglo-American Packing Company of Chicago has stopped packing hogs, and 3,000 men are out of employment.

The contested land grant of the Northern Pacific Railroad involves more than \$100,000,000 at the average price of the lands.

The total national debt less cash in the treasury August 1, was \$1,675,054,433. The total cash in the treasury was \$241,098,081.

Major General G. C. Warren, the commander of the Fifth Army of the Potomac, is reported to be dangerously ill at Newport, R. I.

The famous Mariposa estate of 44,000 acres in California has been sold by the sheriff for \$300,000, and the time for redemption has expired.

Reading Clerk Clizbee, of the National House of Representatives, has recovered from the stroke of paralysis which recently attacked him.

For the week ending July 30 the number of cattle passing up the trail through Indian Territory was 1,106,700. This is the largest herd on record.

New York's corporation council says the State will not give light between Sullivan and Wilson can be stopped if the authorities are willing to act.

Mrs. Jesse James has just sent back to John J. Doney, of Philadelphia, a gold watch which he was robbed at a Kentucky coal mine in 1880.

D. R. McCarty, of Floyd County, Ga., has succeeded in making a new article of syrup, watermelon juice. It is rich and thick, and has the taste of honey.

Two trains loaded with hay have just come into Union Pacific from San Francisco to Chicago in a little over six days, the fastest time for freight yet made.

An authority on the egg trade says the aggregate transactions in New York alone amount to \$15,000,000 per annum, and in the United States to \$75,000,000.

Mrs. Margaret Sanderson, the lady who made the "Star Spangled Banner" key to write "The Star Spangled Banner," died in New York on Saturday, aged 85.

COUNTY FAIRS OF 1882.			
Name of Society.	Where Held.	Date of Fair.	Address.
Armada County Agr. Society	Armada	October 4 to 6	J. R. Barringer.
Bay	Bay City	September 30 to 31	J. E. Bennett.
Branch	Branch	September 30 to 31	J. E. Bennett.
Cass	Cassopolis	September 30 to 31	D. W. Fisk.
Clinton	St. Johns	September 30 to 31	L. H. Glover.
Calhoun	Marshall	September 30 to 31	L. P. Adams.
Baton	Charlotte	September 30 to 31	Geo. S. Wooler.
Grand Traverse	Traverse City	September 30 to 31	Esck Pray.
Genesee	Flint	September 30 to 31	H. D. Campbell.
Hillsdale	Hillsdale	September 30 to 31	J. H. Hick.
Isabella	Isabella	September 30 to 31	F. M. Miller.
Leavenworth	Leavenworth	September 30 to 31	G. F. Jackson.
Macomb	Macomb	September 30 to 31	J. H. Hick.
Mason	Mason	September 30 to 31	F. M. Miller.
Manistee	Manistee	September 30 to 31	J. H. Hick.
Monroe	Monroe	September 30 to 31	F. M. Miller.
Oakland	Oakland	September 30 to 31	J. H. Hick.
Ocean	Ocean	September 30 to 31	F. M. Miller.
St. Joseph	St. Joseph	September 30 to 31	J. H. Hick.
Tuscola	Tuscola	September 30 to 31	F. M. Miller.
Van Buren	Van Buren	September 30 to 31	J. H. Hick.
Washtenaw	Washtenaw	September 30 to 31	F. M. Miller.
Stockbridge Agricultural Society	Stockbridge	September 30 to 31	J. H. Hick.
Hadley District Agr. Society	Hadley	September 30 to 31	F. M. Miller.
Eaton Rapids Union	Eaton Rapids	September 30 to 31	J. H. Hick.
Union	Union	September 30 to 31	F. M. Miller.
St. John Valley Union	St. John	September 30 to 31	J. H. Hick.
Plainwell (Allegan County) Union	Plainwell	September 30 to 31	F. M. Miller.
North Branch	North Branch	September 30 to 31	J. H. Hick.

At Antioch Mills, Ky., Friday evening, Dan Grueble and John Asbury, two well known residents, fought with pistols. Asbury was killed. The battle originated in an old feud.

Col. Cash, who killed Col. Shannon in a duel some months ago, is an independent candidate for Congress in the fifth South Carolina district. He wants to be vindicated.

The amalgamated association of iron workers numbers about 870,000 members, of whom 18,000 are now idle on account of strikes, and are being supported by the other 85,000.

Four elephants escaped from a circus at New Orleans, last week, and created a general disturbance. One woman was fatally injured, and several others hurt or badly frightened.

A flood in the Licking River last week swept away \$100,000 worth of damages to coal barges and other craft moored in the Ohio at the mouth of the Licking. The water rose 25 feet in 20 hours.

Maj. Hiram Mills, a native of Virginia, died at Montreal Tuesday, aged 85. He leaves \$100,000 to charities, stipulating that no drinking or smoking be tolerated in colleges receiving his bounty.

A report from the Toledo says that much of the corn crop in that region south of that city is ruined by the heavy rains. The fields are under water and the farmers discouraged. Trees, fences and crops are prostrated.

In round numbers in 1881 the railroads in this country earned \$725,300,000; they paid out for working expenses \$440,600,000; interest on their bonds was \$128,600,000; they paid their stockholders in dividends \$93,900,000.

While a carriage with five occupants was returning from a funeral at Philadelphia last week, the horses ran away, throwing out the driver against a telegraph pole, killing him instantly. The other occupants were unhurt.

The recent collision on the Lake Shore Railroad, near South Bend, Ind., where two freight trains were piled up together, is said to have caused a loss of \$30,000, and was caused entirely by the carelessness of the employees of the road.

Great excitement exists in Lake View, New Mexico, over the discovery of silver deposits in the Black Range, about ten miles from Nutt. In one shaft of the Sierra mines a vein of chloride and silver silver 40 feet thick has been found.

At Elkhart, Ind., on Friday night, a two year old child of Mr. Furuker, rector of the Episcopal church, in that city, died from the effect of a dose of morphine administered for quinine through the mistake of a druggist.

A brakeman on the Cincinnati Southern railway refused to allow the colored wife of a clergyman to ride in the ladies' car. They rode on another line, but sued the objecting company, and have received \$1,000 compensation.

A deficiency of \$50,000 has been discovered in the Alms House accounts of Philadelphia, Pa. It occurred through the practice of paying bills for supplies in bills instead of in cash drawn from the treasury for the purpose. Several officials are implicated.

J. J. Newell, a former citizen of Adrian, was not allowed to tell what he knew in regard to his charges of corruption against certain Congressmen in connection with the Texas Pacific land grant. The committee perhaps thought "other hearts might ache."

The aggregate receipts of grain and flour reduced to wheat bushels at the six lake ports of Chicago, Milwaukee, Toledo, Detroit, Cleveland and Duluth, from August 1, 1881, to July 31, 1882, were 195,194,607 bushels, being a decrease from the previous year of over 65,000,000 bushels.

Senator Ben Hill, of Georgia, is declared to be past all hope. He says his chief regret is that he cannot deliver a speech he has partly prepared on the relation between white men and black men in this country. He says he is in favor of giving colored men equal and exact justice, and there can never be peace in this country till they get it.

Nearly 30,000 citizens of Missouri, including county officials in different parts of the State, have signed a petition to Gen. Hubbard of Minnesota, urging him to pardon the Younger brothers, who have been imprisoned four years. We think there is enough of this kind of petition in circulation, without letting loose these notorious robbers and murderers.

The committee on foreign affairs have unanimously adopted a report on the Chili-Peruvian investigation, exonerating Mr. Hubert and Kilpatrick. It says Minister Horton was indiscreet though not reprehensible, and avoids all comment on Senator Blair for power in the investigation. It refers to Blaine is struck out. Every one ought to be happy over such a report. No one to blame, but they must not do so again.

The Ohio River was very high the past week, and considerable damage was done to a number of serious accidents resulted therefrom. Other streams also overflowed their banks. Near Manchester, O., a man, woman and three children were killed, and a steam mill, five buildings were washed away. At Mayville, Ky., a slaughter house was carried off by the flood, and other buildings wrecked. Nine lives are reported lost, and considerable damage to boats and barges will be \$100,000.

A fishing fleet from Peterhead, Eng., was caught in a gale last week, and 200 boats are missing.

Limerick, Ireland, has been proclaimed under the repression. Any one out after sunset is liable to arrest.

The French ministry resigned last week owing to a vote of lack of confidence by the chambers. A new ministry is being formed by President Grevy.

Baron Hirs, the manager and virtual owner of the Turkish railways, is sending 5,000 Russian Jews at his own cost to the United States.

The sardines have suddenly returned in large numbers to their accustomed wants on the coast of France. The cause of their absence is still unexplained.

King Cetewayo, accompanied by nine of his followers, have landed in England. Cetewayo is anxious for an interview with the Queen, and believes in his early restoration to his kingdom.

Lord Dufferin, the English Ambassador, wants the Sultan to declare Arabi Pasha a rebel, but so far the Sultan refuses to do so. Many believe there is an understanding between the Sultan and Arabi.

The London Times says of the English harvest: "What will not nearly amount to a fair average crop. That is, it will be no better than for the last five years. Barley promises to be a little more than an average yield. Oats are good."

The Hillsdale crew has challenged the Amateur Rowing Association to furnish an annual

NEW ADVERTISEMENTS.

Homestead Superphosphate!

	Jackson.	Battle Creek.	Adrian.	Kalamazoo	Ypsilanti	Average	Lbs in ton of 2,000 lbs	Value per lb	Total value
Soluble Phosphoric acid	8.18	7.97	8.01	7.75	8.83	7.98	150.00	15 cts	\$23.94
Reverted Phosphoric acid	3.39	3.35	3.27	3.43	3.51	3.42	68.40	10 "	6.84
Insoluble Phosphoric acid	2.78	2.68	2.83	2.45	2.81	2.71	54.00	15 "	8.24
Nitrogen	2.45	2.61	2.36	2.37	2.64	2.48	48.00	25 "	12.30
Equivalent to ammonia	2.97	3.16	2.87	2.87	3.24	3.02			
Moisture	9.80	12.02	12.62	15.37	12.00	12.88			
Commercial value per ton	\$47.30	\$46.87	\$45.80	\$44.88	\$47.72				\$46.22.

STATE AGRICULTURAL COLLEGE, LANSING, MICH.

Michigan Carbon Works:

GENTLEMEN—At your request I have made a careful examination of the composition of the Homestead Superphosphate, so far as relates to the quantity of Phosphoric acid and available ammonia which it contains as it is found in the market in this State. In order that there might be no possibility that the specimens were especially prepared for analysis, from the list of agents you sent me I selected six in different parts of the State and sent to them for samples of the goods such as they had for sale. I received specimens from Ypsilanti, Adrian, Jackson, Battle Creek and Kalamazoo. I sent to Holly for a specimen but did not receive any.

Before giving the results of analysis permit me to explain some of the terms employed. Ordinary phosphate of lime, or "bone phosphate," is such as is found in the bones of animals; it is insoluble in water and passes into the soluble condition very slowly in the soil. But in order to become useful to the growing plant it must become soluble in water, because it can only enter the roots in solution; "the plant lives by drinking rather than by eating." When sulphuric acid is added to the insoluble or bone phosphate, a part of the lime unites with sulphuric acid forming sulphate of lime; the bone phosphate, which has lost two-thirds of its lime, becomes superphosphate of lime and is then soluble in water. After a time a part of this soluble superphosphate again becomes insoluble in water, but is still soluble in

NEW ADVERTISEMENTS.

citrate of ammonia; it is then called reverted or precipitated phosphate. It is intermediate in activity and value between soluble and insoluble phosphate. By phosphoric acid in the above table is meant the anhydrous phosphoric acid, or what chemists call pentoxide of phosphorus. The soluble acid, the quality of this material which is soluble in cold water, the reverted acid that which was once soluble in water but has now become insoluble in water but is still soluble in citrate of ammonia and other weak solvents; the insoluble acid that which still remains in the form of bone phosphate.

The above table shows a pretty uniform composition in specimens brought from different places.

Many people ask what is the money value of manure? It is difficult to answer this question. If we adopt the standard of valuation given by Prof. Johnson of Connecticut, viz: for soluble phosphoric acid, 15 cents a pound; for reverted, 10 cents; for insoluble, 6 cents a pound; for nitrogen, (from blood,) 25 cents a pound, we may construct the above table, which gives the percentage of each material discussed, the amount in a ton of two thousand pounds, the price per pound, and the calculated value for a ton of the Homestead Superphosphate.

In this valuation I have not included the sulphate of lime, and the potash salt which the Homestead contains.

I do not mean to say that every farmer who uses a ton of Homestead will receive a cash value in return, of the amount above stated. Some may receive more and some

less, just as their soil may require this manure or not, and as the crop may or may not be such as requires this particular manure. This topic I reserve for further consideration. I only give the valuation as estimated on the basis in use in New England, where commercial manures are largely used.

Trusting that this examination of the Homestead Superphosphate will be of some value by enabling the farmers to make their own estimate of what this manure contains, and to form some estimate of its value. I remain, yours truly,

R. C. KEDZIE, Prof. of Chemistry.

Michigan Carbon Works: LANSING, MICH.

GENTLEMEN—Your favor is received, in which you ask whether the use of Homestead Superphosphates, while imparting a temporary fertility, can ultimately lead to exhaustion of the soil? I answer that the use of such a superphosphate cannot exhaust the soil, because it furnishes to the soil the very elements which are likely to be soonest deficient in the soil, namely, potash, soluble phosphoric acid and combined nitrogen. How can the addition of these necessary materials exhaust any soil? As well fear that a horse will starve because he has oats in his food. Yours truly,

R. C. KEDZIE, Prof. of Chemistry.

Test Homestead on part of Each Field

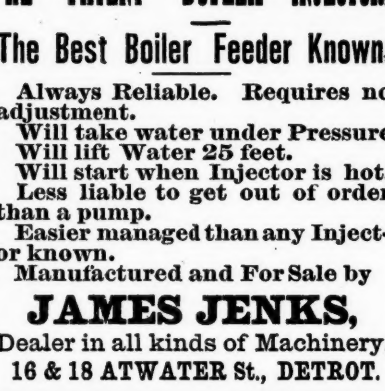
Sample Bbl. of 200 lbs. will be sent on receipt of P. O. Order for \$4.00.

NOTE.—The above analyses were taken from samples selected at random by Prof. Kedzie. Our aim since these experiments were made has been to produce a higher percentage of soluble Phosphoric Acid, and we have also added Potash, as analyses of our present product will prove.

GOOD AGENTS WANTED IN EVERY TOWN.

Address,

MICHIGAN CARBON WORKS, Detroit, Mich.



THE PATENT DUPLEX INJECTOR.

The Best Boiler Feeder Known.

Always Reliable. Requires no adjustment.

Will take water under Pressure Will lift Water 25 feet.

Will start when Injector is hot. Less liable to get out of order than a pump.

Easier managed than any Injector known.

Manufactured and For Sale by JAMES JENKS, Dealer in all kinds of Machinery, 16 & 18 ATWATER ST., DETROIT.

CHAMPION GRAIN DRILL

WITH OR WITHOUT Fertilizer Attachment, Spring Hoes or Corn Planter.

Force Feed Grass Seeder.

Every Fertilizer Drill warranted to sow easily, evenly and accurately any of the various kinds of seed.

Phosphates or Guano Wet or Dry.

The only Grain Drill having a Special Device for Planting Corn for the Crop

No GRAIN DRILL in the market can perform so great a variety of work. Many thousands in use.

Send for DESCRIPTIVE PAMPHLET to JOHNSON, CERE & TRUMAN, 81 & 83 Merwin St., Cleveland, Ohio.

Choice Jersey Heifers FOR SALE.

An in-bred Pierrot—Pierrot's Moss Rose No 18484 A. J. C. C. H. R. dropped May 25th, 1879; sire, the celebrated bull Pierrot No 1867; dam, Pierrot's Rose No 1869, with a record of 2 3/4 quarts of milk in 30 days. Moss Rose has been bred to Wolverson King No 5106, and will be due to calve June 17th. Price \$500.

Pierrot's bull, the sire of above heifer is also sire of Mary Walker, 3 1/2 quarts; Lady Hayes, 1 3/4 quarts; and Lady Buckingham, over 19 quarts, all in three years. Lady B. is valued at \$1,000 and Rose had sold at \$1,000 in combination sale in May, 1881, at \$600.00.

Another promising Jersey heifer, SPRING BEAUTY No 1—A. J. C. C. H. R. dropped December 10, 1881. Dam imported Lady Florence No 18185 A. J. C. C. H. R. Sire, imported Pride of the Island No 5110 A. J. C. C. H. R. Grand Sir, known on the Island of Jersey as Snap, in this country he has been bred to 3 1/2 quarts of milk in 30 days. Price \$500.

Another promising Jersey heifer, SHIRAZ OF ORLEANS, dropped November 21, 1880; color red. Sire, Second Lady of Lee Farm 1889 C. R. & D. M. Shifty of Stamford, 1873 C. R. & D. M. Shifty 3d, 3190 A. C. A. H. B. G. dam, Shifty 1839 A. C. & H. B. Heifer in calf to Laird of Compton (registered). Price \$100. Address,

H. H. JAMES, Detroit, Mich.

FINE HOLSTEINS

For Sale Very Cheap.

Two year old bull and four year old cow are offered at a great bargain to close out stock. Address

E. B. WARD, Grand Rapids, Mich.

TROTTER-BRED STOCK FOR SALE.

On account of poor health I offer for sale at a low price, a Hambleton colts "Roger A." and "Daisy B."

ROGER A.

dark brown stallion, foaled June 30th, 1879; 15 1/2 hands high; weight 1,000 lbs. Sired by Louis Napoleon, Volanteur. Dam, Fannie Jenkins by Owsens Price, by Milford Mambrino, by Mambrino Chief, 3d dam Fannie, by Robin Hood, by Andrew Jackson, by Young Bashaw, by Grand Bashaw. Owsens Price's dam was sired by Alexander's Arab stall, by Rysdyk's Hambleton.

DAISY B.

bay mare; foaled July 5th, 1879. Sired by Louis Napoleon. Dam Kitty O'Connell, by Owsens Price. I have also for sale at all times Scotch Collie Shepherd Dogs. I have imported and bred them for 18 years and have 30 on hand now.

JAMES A. ARMSTRONG, Crowsco, Mich.

WEST NOVI HERD. PURE SHORTHORN CATTLE.

Oxford Gwynnes, Phillips, Bonnie Lassie, Bell Duchesne Pomona. With Oxford Rose of Sharn, 4457 A. H. B. at the head. The entire herd is recorded in the American Herd Book. A part of the herd is for sale privately. Address,

A. S. BROOKS, Wixom, Oakland Co., Mich.

STOCK AUCTIONEER.

Thoroughbred Stock and general auctioneer. Office 38 Griswold Street, Detroit, Mich. Sales conducted throughout the State. Well posted in pedigrees and breeding.

CIDER

PRESS, (hand and power) GRATER, Elevator, Jolly Pan, Siphon Mills, Circular Saw Mills, All Cider Mill Machinery. Illustrated catalogue free. Address C. G. HAMPTON, Detroit, Mich.

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Michigan Carbon Works:

GENTLEMEN—At your request I have made a careful examination of the composition of the Homestead Superphosphate, so far as relates to the quantity of Phosphoric acid and available ammonia which it contains as it is found in the market in this State. In order that there might be no possibility that the specimens were especially prepared for analysis, from the list of agents you sent me I selected six in different parts of the State and sent to them for samples of the goods such as they had for sale. I received specimens from Ypsilanti, Adrian, Jackson, Battle Creek and Kalamazoo. I sent to Holly for a specimen but did not receive any.

Before giving the results of analysis permit me to explain some of the terms employed. Ordinary phosphate of lime, or "bone phosphate," is such as is found in the bones of animals; it is insoluble in water and passes into the soluble condition very slowly in the soil. But in order to become useful to the growing plant it must become soluble in water, because it can only enter the roots in solution; "the plant lives by drinking rather than by eating." When sulphuric acid is added to the insoluble or bone phosphate, a part of the lime unites with sulphuric acid forming sulphate of lime; the bone phosphate, which has lost two-thirds of its lime, becomes superphosphate of lime and is then soluble in water. After a time a part of this soluble superphosphate again becomes insoluble in water, but is still soluble in

citrate of ammonia; it is then called reverted or precipitated phosphate. It is intermediate in activity and value between soluble and insoluble phosphate. By phosphoric acid in the above table is meant the anhydrous phosphoric acid, or what chemists call pentoxide of phosphorus. The soluble acid, the quality of this material which is soluble in cold water, the reverted acid that which was once soluble in water but has now become insoluble in water but is still soluble in citrate of ammonia and other weak solvents; the insoluble acid that which still remains in the form of bone phosphate.

The above table shows a pretty uniform composition in specimens brought from different places.

Many people ask what is the money value of manure? It is difficult to answer this question. If we adopt the standard of valuation given by Prof. Johnson of Connecticut, viz: for soluble phosphoric acid, 15 cents a pound; for reverted, 10 cents; for insoluble, 6 cents a pound; for nitrogen, (from blood,) 25 cents a pound, we may construct the above table, which gives the percentage of each material discussed, the amount in a ton of two thousand pounds, the price per pound, and the calculated value for a ton of the Homestead Superphosphate.

In this valuation I have not included the sulphate of lime, and the potash salt which the Homestead contains.

I do not mean to say that every farmer who uses a ton of Homestead will receive a cash value in return, of the amount above stated. Some may receive more and some

less, just as their soil may require this manure or not, and as the crop may or may not be such as requires this particular manure. This topic I reserve for further consideration. I only give the valuation as estimated on the basis in use in New England, where commercial manures are largely used.

Trusting that this examination of the Homestead Superphosphate will be of some value by enabling the farmers to make their own estimate of what this manure contains, and to form some estimate of its value. I remain, yours truly,

R. C. KEDZIE, Prof. of Chemistry.

Michigan Carbon Works: LANSING, MICH.

GENTLEMEN—Your favor is received, in which you ask whether the use of Homestead Superphosphates, while imparting a temporary fertility, can ultimately lead to exhaustion of the soil? I answer that the use of such a superphosphate cannot exhaust the soil, because it furnishes to the soil the very elements which are likely to be soonest deficient in the soil, namely, potash, soluble phosphoric acid and combined nitrogen. How can the addition of these necessary materials exhaust any soil? As well fear that a horse will starve because he has oats in his food. Yours truly,

R. C. KEDZIE, Prof. of Chemistry.

Test Homestead on part of Each Field

Sample Bbl. of 200 lbs. will be sent on receipt of P. O. Order for \$4.00.

NOTE.—The above analyses were taken from samples selected at random by Prof. Kedzie. Our aim since these experiments were made has been to produce a higher percentage of soluble Phosphoric Acid, and we have also added Potash, as analyses of our present product will prove.

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The Best Boiler Feeder Known.

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Phosphates or Guano Wet or Dry.

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Choice Jersey Heifers FOR SALE.

An in-bred Pierrot—Pierrot's Moss Rose No 18484 A. J. C. C. H. R. dropped May 25th, 1879; sire, the celebrated bull Pierrot No 1867; dam, Pierrot's Rose No 1869, with a record of 2 3/4 quarts of milk in

Poetry.

FOUR FEET ON THE FENDER.

It is anthracite coal, and the fender is low,
Steel-barred in the grate—and the tiles
Hand-painted in figures—the one at the top
Is a Japanese lady who smiles.
There's an ornate clock on the mantel; above
Is a masterpiece; fecit Gerome:
On the fender four feet—my young wife's sand mine
Trimly shod, in a row, and at home,
My slippers are bordered of velvet and silk—
The work of her fingers before
We stood at the altar. To have them made up
Cost me just a round five dollars more
Than a new pair had cost at my boot-maker's shop;
But each stitch was a token of love,
And she never shall know. Ah, how easy they are
On their perch these tender above.

Words fail me to tell of her own. There's a chest
In her father's old parlor—and there,
Mid a thousand strange things of a century past,
She discovered this ravishing pair.
They are small, trim, and natty; their color is red,
And they each have the faintest heel,
White Balbriggan stockings, high-clocked under-
neath,
These delicate slippers reveal.

Al, many a time in my grandfather's day
They led the old fellow a dance.
They were bought with Virginia tobacco, and came
Who would guess it?—imported from France.
How odd that you should find an ancestor of mine,
In the earlier days of his life.
Should have loved her who tipped in those red
slippers then—
The young granddaughters of my wife!

The course of some true love, at least, runs not
smooth;
And I'm glad that 'tis so when I see
The trim, dainty feet in the red slippers there,
Which belong to my lady—and me!
Two short months ago in this snug little room
I sat in this self-enclosed nest;
No companion was near save my pipe. Now behold
On the polished steel fender four feet!

Let them prate of the happiness Paradise yields
To the Moslem—the raptures that thrill
The soul of the Hindu whom Juggernaut takes—
The bliss of Gad-Eden, and still
I'll believe that no gladness which man has con-
ceived
Can compare with the tranquillized state
That springs from two small feet alongside one's
own.

On the fender in front of the grate—
—L'ESPOIR.
In vain the illusion. The trim feet are gone—
They pass by my door every day—
Yet they stop not nor tarry, but swiftly pass on
Nor can I persuade them to stay.
And a bachelor's dreams are but dreams at the best
Be they never so fond or so sweet.
The authentic bliss has passed lower, and behold
On the fender two lone old feet!

—A. C. Gordon, in the Century.
MAKING HAY.
Out in the meadow tossing hay,
Rich with the scent of clover,
Out in the meadows the living day,
Turning the grasses over,
Robert is busily working away,
From morn until day's declining;
Working away and making hay,
While the summer sun is shining!

He whistles and sings, for his heart is light,
And gay as the sunshine o'er him;
And smiles illumine his face so bright,
As he tosses the hay before him;
And in and out his thoughts all day
Are fancies their threads entwining,
While he's working away and making hay,
While the sun is brightly shining.

Winds of summer are ready to blow
Over the grasses and under,
As soon as the farmer chooses to go
And scatter the seeds sower;
And out on the highroad far away,
The perfume of mowing is blowing,
Some one will say, "They're making hay!
And bright the sun is shining!"

Then after the toll of the day is done,
The cattle are under cover,
When low in the west declines the sun,
Where goeth the farmer lover?
Toward the village he takes his way,
His heart with a message laden;
For the lad so gay has something to say
To-night to a certain maiden.

And under the balmily evening skies,
In the glorious summer weather,
With stars a gleam in each other's eyes,
They wander away together,
And should you meet them (perchance you may),
You'll know by her blush so charming,
That love has a way of making hay
Unknown to the rules of farming.

—Josephine Pollard.

Miscellaneous.

DIRECT FROM JAPAN.

"I never was so disappointed in my life," said old Miss Beckley, letting her eyelashes drop hopelessly at her side. "Are you quite sure, Belinda?"

"I've been everywhere," said Miss Belinda Beckley, the younger of the two ancient maiden ladies. "Everywhere! And there's nothing that corresponds with it in the least degree."

The two Misses Beckley looked at each other despairingly. And if one had been gifted with a fertile imagination, it would have been easy to fancy them a pair of elderly enchantresses in the midst of a magic palace. For the quaint, low ceiled drawing rooms were filled with jointed bamboo screens, carved masses of ivory, hideous painted ware, and tiny cups and saucers as transparent as so many eggshells. And, by way of finishing up the harmonious whole, they had hung their walls with draperies and banners with wrinkled crepe encircled with gold thread, lustrous satin, brocade tapestry, even strips of gilded paper, where Oriental plants blossomed, and phenomenal birds set all one's preconceived ideas of perspective at defiance.

And a faint perfume of teak and sandal wood hung on the air, and dingy rugs blotted out the harvest roses and tulips of the carpet, which had been good enough for the half pay Captain who had once been uncle to the two Misses Beckley, and it only required a coffee colored native with wooden shoes and a braided queue to make one believe one's self in the Flowery Land.

"Japanese, you see," the two old ladies would say, looking complacently at the astounded guest who had stumbled from an atmosphere of newly fallen snow and New York sunshine into this half lighted, strangely scented mosaic of the East— "entirely Japanese."

But life is not without its shadows, and upon the especial evening, as the nephews and her apparently of the old ladies, one Frank Franklyn, sauntered in just as the daffodil gold of February twilight was turning to hazy purple, he found both his

aunts plunged in the deepest abysses of gloom. Mr. Franklyn looked from one to the other of the weird and agitated faces. He knew that Aunt Marina's cap was never tipped at that particular angle over her false front except when matters were very bad indeed and Aunt Belinda leaned against the mantel in an attitude of limp despair.

"What is the matter?" he asked, setting his hat on a lacquered tripod in one corner, and balancing his cane in the angle of the wall, behind the stuffed ibis, whose speculative eyes seemed to glare at him from the partial shadow, after a most uncomfortable fashion.

"Look there, Frank!" solemnly intoned Miss Beckley, pointing with her crooked gold-headed cane to the opposite wall.

"Beautiful!" said Frank Franklyn, at a venture. For he saw only a long narrow parallelogram of black satin mounted in a border of glimmering gold brocade, with a back-ground on which a pensive stork wandered through waves of lead colored silk embroidery, and beneath the silver-green shadow of sacred palms.

"Isn't it?" said Miss Belinda, her venerable face lighting up with momentary satisfaction, only to darken again into gloom. "But, oh! Frank, we haven't got a match for it."

"Not got a match for it?" cried Miss Beckley tragically lifting her hands, "in all this room that is fit to hang on the other side of my dear grandfather's portrait."

"Why," said this reckless incoherent. "I should think that almost anything would do."

The two old ladies uttered a simultaneous cry of dismay and horror.

"Frank," reasoned mild Miss Beckley, "you don't understand high art."

"You're a dear, good-hearted fellow," added Miss Belinda, with that degree of charity wherewith a missionary may be supposed to regard a well intentioned cannibal, "and in a knotty point of law I don't suppose you have your equal. But, you see, you are not aesthetic."

"N—no," confessed Mr. Franklyn, rubbing his nose; "perhaps I am not. But why don't you and Aunt Marina go down to the stores and match the thing?"

"We have tried," said Miss Beckley. "It can't be done," added Miss Belinda with a sigh.

"Give it to me," said Frank, who was great at an emergency. "I'll take it down with me to-morrow. There's a new place open near the docks, where they pretend to import novelties. Tado Anoko, I believe, is the name painted up over the door. Probably the concern is kept by an Irishman, with a staff of German clerks. But I've seen some nice things out at the door. Perhaps I can obtain something to suit you there."

"O, Frank, if you only could!" cried Miss Belinda, clasping her mitted hands. "At all events, it is worth the trial," said Miss Beckley cheering up a little.

"Tado Anoko! That is quite a new name."

So Mr. Franklyn, on his way to the legal Mecca of Waitstill & Lingerlong, the next day, stopped at the newly painted and gilded establishment of Tado Anoko, where a plump red whiskered man, who spoke excellent English (with perhaps a redundancy of his) placed himself at his service. Together they unrolled the ivory mounted banner and viewed the stork and the palms and the wonderful needlework wares of the Kyusi River.

"Very sorry," said the superintendent, as he called himself, of Tado Anoko's bazar, "but I don't suppose, sir—I don't indeed,—as you'll find anything to correspond with this 'ere piece of 'igh art. There never was but a few of 'em imported. And they're all bought up. Law bless you, sir, the gentry they will 'ave 'em sir, at any price."

A plump, fresh colored old woman, the salesman's aunt, who had been arranging palm-leaf fans on a gigantic screen at the back of the store, now came forward, peeping at the satin scroll over her nephew's shoulder.

"It's quite true, sir, what Simpson says," pronounced she. "I know those banners. There ain't one to be had in the city. Praps our house may import some more for the holidays; but—"

"Call Alta Graves," imperiously interrupted Mr. Simpson. "She knows a deal about the stock. She can tell us."

Alta Graves was summoned—a pretty, pink cheeked little damsel, with hair brown as a shining like a newly ripened chestnut, and dark eyes which she scarcely ventured to lift from the floor. "O, yes," she assented, in an innocent, birdlike sort of voice, "she had seen those banners. But there was none at present remaining in Tado Anoko's store of imported novelties. Unless, indeed, the gentleman would take a fine quality of paper mounted on linen—"

But Mr. Franklyn shook his head. Paper would not meet the views of the ladies in whose behalf he was conducting the investigation, he said. The banner must be of satin, of the same black color, embroidered in a corresponding pattern. He was sorry for giving so much trouble, and he went out, leaving his card, so that in case any new vein of banners or decorations should be struck at the eleventh hour, he might perchance get the benefit of it.

Three days afterward, just as the hands of the office regulator were consolidating themselves at the figure twelve, and the bells of Old Trinity were pealing their musical noon jingle, there came smallest of tap-taps at the outer door of the firm of Waitstill & Lingerlong, in which Mr. Frank Franklyn was a silent partner. And there stood Alta Graves, rosy and palpitating.

so that the coast was clear. What on earth did she want of him? he asked himself. Had the firm got into a lawsuit, and had she been sent to bid his immediate presence on the scene? Or was she herself about to sue her principals for a breach of contract?

"Can I be of any service to you?" he courteously asked, as she stood there, still breathless, and turning from pink to pale.

"Would you please look at this, sir, and see how you like it?" said she, hurriedly unrolling a little parcel which, until now, she had carried in her hand.

It was a long strip of black satin, with a scarlet plumed bird wading through white silk deeps of water, with the sacred Mountain Fusiama rearing its peak beyond, while in the foreground waved a picturesque tangle of reeds and rushes.

"The very thing," exclaimed Franklyn. "But it isn't mounted."

"Almost any store will do that for you, sir," said Alta, her cheek brightening into still deeper carmine at his evident satisfaction.

"But why didn't you show me this the other day he questioned."

"I—I hadn't found it then," answered Alta, in some confusion.

"And what is the price?" Mr. Franklyn asked, putting his hand in a business like way into his pocket.

Here again pretty Alta seemed to be puzzled. She didn't know, she said. Could the gentleman tell her the price of the other one?

It was \$10, Mr. Franklyn believed.

"Then," said Alta, speaking with an evident effort, "would you think this too dear at \$8, seeing that it isn't mounted?"

"I should consider it a very fair price," said Mr. Franklyn, kindly. And he paid her the money—a gold half eagle and three crisp clean \$1 bills; and she vanished away down the long hall like a little gray shadow.

"What a fool I was," thought Mr. Franklyn suddenly rousing himself from a reverie, "not to ask her to take it to Anoko's, to be mounted on ivory! And now I shall have to go around there myself. Very stupid of me; but then I often am stupid. But how pleased my aunts will be, bless their dear old hearts! And what a wonderful pair of limpid hazel eyes that little girl has got!"

And all day long Alta Graves' sweet pea face came between him and the dusty pages of his prosy law books, like a vague dream of what might have been, had she not been a shop girl and he a bachelor close on the forties.

He went home early, and on his way he stopped at the establishment of Tado Anoko.

Mr. Simpson uttered an exclamation of amazement at the sight of the ibis and the sacred peak, Fusiama. "Well, I never!" cried he. Aunt Sarah, look 'ere. Where on earth did you get this 'ere, sir, if I may make so bold as to ask? For I didn't know, I gave you my word of honor, as there was one like it in the city."

It was now Mr. Franklyn's turn to open his eyes. "The young lady whom you call Alta Graves brought it to me," said he; "and I supposed, of course, that you had sent it."

"Alta Graves!" repeated Mr. Simpson. "Our Alta!" shortly spoke Miss Sarah.

"Then, as sure as my name is Sarah Simpson, she have stole it—and out of our very stock. And she knowed of it all the time, the ungrateful minx, while we was sturving over everything to find a match for the banner that you brought here. And you paid her, you say, sir? Her?"

"Certainly I did," said Mr. Franklyn, becoming more and more puzzled and uncomfortable. For as to the oval-faced little maid with the liquid brown eyes being a thief, he did not believe a word of it.

"Very well," asserted Simpson; "this settles the ole affair. There can't be no doubt about it now; for she 'ave never paid us the cash for this 'ere satin banner."

"I always suspected she wasn't reliable," said Aunt Sarah, slowly wagging her head to and fro. "She's a deal too good looking. I never had no faith in good looking girls myself. Didn't I tell you so, Simpson?"

And Alta Graves, who was unpacking a hamper of cups and saucers and fantastical ly patterned plates down in the moldy basement, was promptly summoned up by mouth of an eager, panting little errand boy. She came, coloring and a little abashed, but prettier than ever.

"Young woman," uttered Simpson, majestically, "what does this mean?"

"Confess at once, you base, unprincipled girl!" said his aunt.

"Look here, Miss Graves," spoke Franklyn, "I'm awfully sorry to startle you so, but there seems to be something wrong about your sale of this banner to me."

"There is nothing wrong," said Alta quietly. "I did sell it to you."

"And where did you get it?" sternly demanded Aunt Sarah. Confess, base girl, that you stole it. Prevarication won't do here."

Alta's cheek crimsoned; her eyes blazed into sudden brilliance.

"Never stole it," she cried. "Do you think I am a thief? O Mrs. Simpson how can you be so hard on me, a friendless girl! I made the banner myself. I bought the satin and the embroidery silk, and the gold thread, out of my savings, and I sat up two nights to embroider it, so that I could earn a little more money than the poor wages you pay me, to buy wine and fruit for my mother, who lies home dying of consumption. There! If that is being a thief, I stand condemned."

And here poor Alta's dignified bearing gave way all at once, and she burst out crying like a child.

Don't fret, my dear," soothed Aunt Sarah, who was a kind hearted woman, in the main. "It's a misunderstanding, that's all. Don't fret."

"It's a very good imitation of the Japanese style—very," remarked Mr. Simpson, closely scrutinizing the gleaming lines of embroidery. "Really, Alta Graves, I think you 'ave genius."

"Pray forgive me for my blundering awkwardness," said Mr. Franklyn.

And Alta tried to smile through her tears, and said that she would. She was ashamed of having made such a scene. The whole

thing was a matter of no consequence whatever.

The satin banner was lined and mounted and Mr. Franklyn took it to his aunts, who could scarcely be ecstatic enough in its praise. It was a gem of beauty, a marvel of art. Such a thing could never, never be gotten up anywhere but in Japan. And it was so good of Frank to find it for them, after they themselves had scoured the high-ways and byways in vain. The love of an ibis! and that exquisite Sacred Mountain! They never could thank their nephew sufficiently.

Mr. Franklyn went the next day to see Alta Graves' mother, on the dreary top floor of the tenement house where the uncompromising sunshine that poured through the curtainless window revealed every flaw in the plastering, every mildewed stain on the ceiling. He came home grave and reflective.

"Aunt Belinda," he observed, "you said the other day that you were not intending to use your seaside cottage at Asbury Park this year?"

"Not if we go to the mountains," said Aunt Belinda, looking up in some surprise; "and I believe that is our plan."

"May I borrow it of you?" asked Frank. "Borrow it?" repeated Aunt Belinda.

And then Frank opened his heart, and told them all—about pretty Alta, with the limpid eyes; about the pale invalid, with the two little girls who played at cat's cradle so quietly at the foot of the bed, and hushed their baby laughter so as not to disturb mama; about the hand to hand contest with want and disease, in which the sick woman was getting so sorely worsted.

"She shall have the cottage," said Aunt Belinda, enthusiastically.

"And I will send my own maid down to make it all comfortable for her as soon as the month of May comes," added Miss Beckley.

And so, perhaps, the old ladies were not so much amazed, in the autumn, when they heard that their nephew Frank had engaged himself to marry Alta Graves. She was very pretty, that was certain, and men like pretty faces; and also they knew that she had been very good and dutiful to the poor mother who had just been laid under the yellow autumn leaves. And if Frank was determined to marry, he couldn't do better, they thought, than to marry Alta Graves.

CAIRO.

The Most Perfect Example of a Mohammedan Capital.

The ordinary population of Cairo is nearly twice as large as that of the great Egyptian port which has, we may almost say, passed out of existence with a swiftness so dramatic and so terrible. The extent of its streets, squares, and other public places is even more than proportionately greater.

This famous city, now familiar to so many travelers and holiday tourists, is the largest city in Africa. It occupies a site upon a spur of the Mokattam hills and the plain below, of about 10 miles in circuit, of oblong shape, comprising within that space more than three square miles, inclusive of the new and fashionable quarter of Ismaileyeh.

It is bordered on the western side by the Nile, which, with the contracted channels formed by the Islands of Roda and Boolaks, flows along under the walls of the palaces of Kasr and Ibrahim Pasha. Behind the city to the east is the lofty range of hills of Mokattam and El Josheh, flanked by the citadel, which commands a magnificent view of Cairo and the Nile, with the arid plains of Ghizeh and the Pyramids in the distance.

Mr. Stanley Lane Poole considers the city "the most perfect example the world can show of a Mohammedan capital." In spite of the Hausmanizing tendencies of recent days and the attempts to raise it to the questionable dignity of an eastern Paris, observes this experienced Orientalist, "we can still shut our eyes to the hotels and restaurants, the dusty grass plots and tawdry villa residences, and turn away to wander in the labyrinth of narrow lanes which intersect the old parts just as they did in the golden days of the Mameluk Sultans."

Cairo is what Alexandria has long ceased to be—a city, which, if it no longer justifies the exclamation of the Jewish physician in the Thousand-and-One-Nights, "He who hath not seen Cairo hath not seen the world," is yet essentially Mohammedan. Its peculiar boast is its mosques and chapels, of which there said to be as many as 400, some of them fine specimens of Arabian architecture—the most celebrated being the mosque of Sultan Hassan, which has a magnificent entrance beautifully embellished with honeycomb tracery. In the poorer quarters the houses are built of mud or sun-baked bricks, and are only one story in height; those of the richer class are of brick, wood and a soft stone quarried in the neighboring mountains, and are two, or frequently three stories high.

Broader streets, with loftier houses, however, have arisen since the accession of the Khedive Ismail, particularly in the neighborhood of the Esbekeyeh, that large public square, once the bed of a lake, flanked with trees around public promenades with large and handsome fountains, and bordered with cafes, shops, hotels and some buildings of a nobler character—as the old palace of Mohammed Ali, the opera house, and the French theatre. This centre of the European life of the city is on the northern side, about a third of a mile from the Ismaileyeh canal. Hereabouts are concentrated the English, French and German consulates, and the American mission. At the eastern corner are the post and telegraph offices; a little further to the north are Miss Whately's schools.

The collection of streets called the Gemayleyeh, where the whole business of Cairo is done, and the quarter which is the center of the Red Sea trade, lie a wall away from the European quarter to the east. The most important of the new streets is the Boulevard Mehemet Ali, which traverses the city in a northerly direction from the Esbekeyeh to the citadel.

The climate of Cairo is considered healthy in the winter months, when the thermometer seldom falls below 40 deg. Fahrenheit, or rises above 70 deg.; but damp, unwholesome exhalations prevail after the July rising of the Nile has subsided; and the heat in August, reaching an average of 86 deg., is oppressive for Europeans.

Extraordinary Discoveries Made by a Delaware Astronomer.

The Delaware astronomer, J. G. Jackson, of Hockessin, who claims to have lately made some important discoveries in connection with the moon, spoke at length regarding his investigations. He said that he had found in looking at the new moon that a white mist was floating over a portion of what is known as the mare crismum, a group of volcano formations well known to astronomers. For an hour Mr. Jackson kept his telescope upon the spot, marking out clearly a large cloud of vapor arising several hundred feet above the promontarium agarum, which is at the base of the mare crismum. Owing to the fact that the terminator had moved over beyond the mare crismum Mr. Jackson was unable to witness the phenomenon on the following night. He said nothing at the time, fearing that he might have made a mistake, but he waited patiently for the next new moon, which occurred on June 17. At this trial he was baffled on account of the cloudiness of the weather. On last Sunday, however, all of the conditions were favorable, and he watched eagerly to test the correctness of his observations. Sure enough the feathery mist was there again on the western

edge of the mare crismum against the promontarium agarum, as he had seen it on May 10. He watched it again until the moon had gone down in the west, and was fully confirmed of the extent and importance of the phenomenon as affecting existing theories regarding the physical condition of the moon, and her atmosphere. His notion is that this cloud forms by volcanic action during the lunar night of every month, and can only be seen for one particular evening at about 48 hours after conjunction (new moon), just as the rays of the morning sun in rising over the mountains of the promontarium became sufficient to illuminate the west, but not yet intense enough to dispel or separate it.

The fact that the moon is then but a slender crescent generally low in the haze of our horizon, seen but an hour or so before setting, Mr. Jackson thinks must be the only reason why it has not been often witnessed. The importance of the discovery consists in that it establishes a fair promise for believing that the theory that the moon is a dead world is incorrect, and would appear to show what has for years been denied by nearly all astronomers, that the moon has an atmosphere.

On Thursday night last, Mr. Jackson claims, he made another discovery in connection with this wonderful cloud. He distinctly saw at the apex of the promontarium agarum, above which the cloud has been seen, three volcanic craters which have never before been discovered by astronomers, and he thinks that the cloud is produced by the bursting of volcanic fires which opened these new craters, thus further tending to establish the theory of physical life on the moon. Mr. Jackson says that when the great telescopes of the world are directed toward investigating this startling phenomenon he has no doubt that discoveries of incalculable importance will be made, which may revolutionize our present theories as to the physical condition of the earth's satellite.

Mr. Jackson is a most careful and pains-taking scholar, and has been an astronomer for nearly half a century. Thirty years ago he calculated exactly the transit of Venus which took place in 1874, and has been a close student of celestial phenomena ever since. He was four years ago nominated for congress, and ran against Col. Martin, the Philadelphia Press.

Too Much Novel Reading.

Says the Boston Transcript: That miscellaneous reading is not an entirely unmixt good must have been suggested to many an observer of the crowds in the lower hall of our public library on any Saturday afternoon, between daylight and dark. The rule that restricts the retention of new books to one week suggests that a book must be of very light quality that can be read in so short a time, by ordinary readers. It can be safely assumed that a patron of circulating reading assimilates very little of the nutriment he receives. George Macdonald draws a pretty picture of a boy—as it Robert Falconer?—lying on the grass under the sky, to think out his subject, because no universal cyclopaedia was at hand to do his work for him. One may agree with Dorothea Brooke in her impatience at seeing a lifetime wasted over work already done; and one may also have opinions as to the merits of translations vs. originals, and yet not regard a human mind as a species of foie gras to be stuffed, stimulate and rendered unwholesome. Perhaps an epigrammatic knack can be acquired by continued reading, but to make that effective it must appear as a spontaneous development. "Speak in of guns" will hardly answer, often. Borrowed epigrams entertain when patly and sparingly employed, but the wit to use almost implies the ability to originate. The class of young people who read with the avowed purpose of doing so that they may thereby learn to talk, is not small. "Oh, have you read 'Dellah'?" "Yes, indeed; isn't it perfectly splendid?" "Have you seen 'Up in a Balloon'?" "No; is it good?" "Too lovely for words; don't fail to get it." "I won't; have you don't 'Skyrockets'?" "Oh, yes; I dote upon all of her books." "Who wrote 'Skyrockets'?" "Why, Rhoda Broughton."

"No, no, she wrote 'Ivanhoe'; let me see—who did write 'Skyrockets'?" Well, I can't remember, and it is no matter; they went off beautifully, etc., etc. "What have you girls been talking about so long?" "Oh, about books. Effie has read everything; and the satisfied mamma exchange approving glances, and say to each other, "Such literary tastes are very becoming in young girls. I do thank Heaven my children are not frivolous."

Tobacco.

Of course every callow schoolboy straining at the end of a cigarette, knows more about tobacco than the whole medical faculty. But possibly an exceptional smoker may be found who will "read, ponder and digest" the reasons given by the surgeon-general of the United States army for the prohibition of tobacco in the national military and naval academies. This gentleman declares: "Beyond all other things, the future health and usefulness of the lads educated at the military [school] require the absolute interdiction of tobacco." The most eminent authorities testify to its evil effects on the digestive organ, the ner-

vous system, the voice and the eyesight. A special form of irritability of the heart is named "tobacco heart." In the Ecole Polytechnique, in France the non-smokers take the highest rank. Even down south, the chewers' paradise, the best schools forbid the use of tobacco. Prof. Richard McSherry, president of the Baltimore Academy of Medicine, declares that the effect of tobacco on schoolboys is so marked as not to be open to discussion. In a late lecture on tobacco by Rev. R. L. Carpenter, of England, the subject of its singular effect in rendering its devotees insensible to the discomfort of others, is sharply put. There is no doubt that, next to drug drinking and licentious habits, the use of tobacco is one of the most dangerous of the national foes to the true development of American manhood—a habit to be discouraged by every teacher of youth.—Journal of Education.

Remedies for Vegetable Poisons.

The most dangerous of the vegetable poisons at this season of the year are the hemlocks (including the hemlock dropwort, water hemlock and the common hemlock), fool's parsley, monkshood, foxglove, black hellebore, or Christmas rose, buckhorn, henbane, thorn apple and deadly nightshade. In a case of vegetable poisoning, says Knowledge, "emetics (such as sulphate of zinc, if procurable) should be used at once, the back of the throat tickled with a feather, and copious draughts of tepid water taken to excite and promote vomiting. Where these measures fail the stomach-pump must be used. Neither ipecacuanha nor tartar emetic should be used to cause vomiting, as during the nausea they produce before vomiting is excited the poison is more readily absorbed. Vinegar must not be given until the poisonous matter has been removed; but afterward it may be given in doses of a wineglassful, one part vinegar and two parts water, once every two hours in mild cases, but oftener—to half-hourly doses—in cases of greater severity.

Where there is stupor, the patient should be kept walking about, and if the stupor is great cold water may be dashed over the head and chest. Strong coffee may be used where the narcotic effect of the poisoning is very marked. It is all-important that in cases of vegetable poisoning a medical man should be sent for at once."

BRET HARTE'S WORLD.—Mr. Harte's world is indeed a compensation for the present, and possibly for the next. Poetic mercy, not poetic justice, brings it into harmony with the general order of the universe, and one has the happiness of finding that the variety show has made the pulpit unnecessary. It is this unmoral treatment of immoral subjects which robs them of their noxious qualities. As soon as we fairly leave our conscience, like our coat, hanging on a nail outside, and enter Mr. Harte's world in social and moral deshabille, we are entertained beyond measure. We read a passage in the life of Mr. John Oakhurst with all the enjoyment with which we might, under the same circumstances, read of the adventures of the prodigal son in a far country, before he came to himself. The people and scenes are so real, under the touch of this man of genius, and yet they belong so entirely to a neighboring world, that we are in no danger of running across them, and finding their recognition of our acquaintance awkward.

People have vexed themselves over the problem of the inhabitation of the moon; certain essentials of life seem to the telescopic look-on to be wanting. They should take thought from the success with which Mr. Harte's world is inhabited by people who wear their principles as ornaments.—[Atlantic.

The Money Plot.

It was predicted by many shrewd financiers that the decline in the rates of interest, which took place during the culmination of the inflated era, would be likely to prove transitory, and that after the recovery from the business prostration caused by the panic of 1873 money would be worth as much as it had been before. But events have demonstrated the fallacy of that prediction. It is difficult to realize above four per cent. for money from investments that are deemed safe in any of the principal cities in the Eastern States, while in the West the rates are not above half as high as they were ten years ago. This condition of things has resulted to a large extent from the rapid growth of agriculture and the largely increased demand in Europe for our food supplies in recent years, with the effect of a great influx of money into the country. But chiefly it has been the result of internal and independent causes. The shrinkage of values prior to the resumption of specie payment established business on a sound basis, and security and stability once more developed healthy enterprise. There was less money invested in doubtful enterprises, and more of it was put to stable use, so that the percentage of loss was very much less. Then our manufacturing industries took their natural revival after the period of depression. Emigration, with its accumulation of wealth, began to flow in again, and there was a steady influx of productive labor and capital. All these things produced an accumulation of capital, while enterprise and speculation had not yet recovered from the check of disaster and its consequent distrust. Therefore, there has been and still is a greater amount of money seeking investment in the United States than at any period in its history, and its national securities have been enhanced to a degree that would not have seemed possible ten years ago. The fact that the income of the government has increased about twenty five per cent. during the last five years shows an expansion of the country

